



THE
HORTICULTURIST

AND

JOURNAL OF RURAL ART AND RURAL TASTE.

DEVOTED TO

HORTICULTURE, LANDSCAPE GARDENING, RURAL ARCHITECTURE, BOTANY,
POMOLOGY, ENTOMOLOGY, RURAL ECONOMY, &c.

EDITED BY A. J. DOWNING,

AUTHOR OF "LANDSCAPE GARDENING," "DESIGNS FOR COTTAGE RESIDENCES," "FRUITS AND FRUIT TREES
OF AMERICA," ETC., ETC.

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THE



JOURNAL OF RURAL ART AND RURAL TASTE.

No. I.

JULY, 1846.

VOL. I.

BRIGHT and beautiful June! Embroidered with clusters of odorous roses, and laden with ruddy cherries and strawberries; rich with the freshness of spring, and the luxuriance of summer,—leafy June! If any one's heart does not swell with the unwritten thoughts that belong to this season, then is he only fit for "treasons, stratagems and spoils." He does not practically believe that "God made the *country*."

FLORA and POMONA, from amid the blossoming gardens and orchards of June, smile graciously as we write these few introductory words to their circle of devotees. Happy are we to know that it is not to us a new or strange circle, but to feel that large numbers of our readers are already congenial and familiar spirits. Angry volumes of politics have we written none; but peaceful books, humbly aiming to weave something more into the fair garland of the beautiful, and useful, that encircles this excellent old Earth.

To the thousands, who have kindly made our rural volumes part of their household library, we offer this new production, which begins to unfold itself now, in the mid-summer of the year. In its pages, from month to month, we shall give them a collection of all that can most interest those whose

feelings are firmly rooted in the soil, and its kindred avocations. The garden and the orchard; the hot-house and the conservatory; the park and the pleasure grounds; all, if we can read them rightly, shall be made to preach useful lessons in our pages. All fruitful and luxuriant grounds shall we revel in, and delight to honor. Blooming trees, and fruitful vines, we shall open our lips to praise. And if nature has been over-partial to any one part of the globe, either in good gardens, fair flowers, or good fruits,—if she has any where lavished secret vegetable treasures that our cultivators have not yet made prizes of, we promise our readers to watch closely, and to give a faithful account of them. Skilful cultivators promise to make these sheets the repository of their knowledge. Sound practice, and ingenious theory will be continually developed and illustrated. The humblest cottage kitchen garden, as well as the most extended pleasure grounds, will occupy the attention of the pens in our service. Beautiful flowers shall picture themselves in our columns, till even our sterner utilitarians shall be tempted to admire and cultivate them; and the honeyed, juicy gifts of Pomona shall be treated of till every one who reads shall discover that the most delicious

products of our soil are no longer *forbidden* fruits.

Fewer, perhaps, are there, who have watched as closely as ourselves, the zeal and enthusiasm which the last five years have begotten in American Horticulture. Every where, on both sides of the Alleghanies, are our friends rapidly turning the fertile soil into luxuriant gardens, and crying out loudly for more light, and more knowledge. Already do the readers of rural works in the United States number more than in any Cisatlantic country, except gardening England. Already do our orchards cover more acres than those of any other country. Already are the banks of the Ohio becoming famous for their delicate wines. Already are the suburbs of our cities, and the banks of our broad and picturesque rivers, studded with the tasteful villa and cottage, where a charming taste in ornamental gardening is rapidly developing itself. The patient toil of the pioneer and settler has no sooner fairly ceased, than our people begin to enter with the same zeal and spirit into the refinements and enjoyments which belong to a country life, and a country home. A fortunate range of climate—lands fertile and

easily acquired, tempt persons even of little means and leisure into the delights of gardening. Where peaches and melons, the richest fruits of the tropics, are raised without walls—where apples and pears, the pride of the temperate zones, are often grown with little more than the trouble of planting them,—who would not be tempted to join in the enthusiasm of the exclamation

“Allons mes amis, il faut cultiver nos jardins!”

Behold us then, with all this growing zeal of our countrymen for our beautiful and favorite art, unable to resist the temptation of commencing new labors in its behalf. Whatever our own feeble efforts can achieve, whatever our more intelligent correspondents can accomplish, shall be done to render worthy this monthly record of the progress of horticulture and its kindred pursuits. If it is a laudable ambition to “make two blades of grass grow where only one grew before,” we shall hope for the encouragement and assistance and sympathy of all those who would see our vast territory made smiling with gardens, and rich in all that makes one’s country worth living and dying for.

NOTES ON A FEW FRUITS OF SUPERIOR EXCELLENCE.

SUCH a vast number of new fruits have been introduced into our gardens lately, that the novice is quite bewildered how to choose; and the more experienced cultivator is forced to pause and consider, when asked “which are the best?”

There are, meanwhile, a few sorts which the experience of the last ten years has proved to be so highly valuable that we shall refer to them, in order more particu-

larly to point them out to many whom we know to be still ignorant of their merits.

There is a large class of very fine fruits which have only a *local* value. They belong to a certain small district where they have originated, where their qualities attain the highest perfection, and beyond which they deteriorate. Among such, must be numbered those surpassingly fine fruits, the Newtown Pippin and the Esopus Spitzen-

burgh. Here, where their local origin placed and confines them, they are truly unrivalled. Abroad, in New-England, at the south, and even at the west, they are scarcely the same fruits.

On the other hand, there is a small class of fruits which seem to have a capacity of adaptation that fits them for soils and exposures of almost every character. Hardy, uniformly productive, and thriving in almost every tolerable soil, they become sources of profit to the orchardist, and of continual enjoyment to the possessor of small gardens. To this class belong the following sorts of fruit.



Fig. 1. The Imperial Ottoman Plum.

PLUMS. IMPERIAL OTTOMAN.—This valuable fruit is comparatively little known. It is named, but not described, in the Catalogue of the London Horticultural Society. We believe it was imported from Europe many years ago by the late proprietor of the Linnean Garden at Flushing.

The Imperial Ottoman has qualities which will soon make it a very popular plum. In the first place, it is among the *earliest* sorts, ripening only two or three days after the Morocco. Secondly, it is *remarkably juicy*, sweet and excellent; the flesh of very melting texture. Thirdly, it is a most abundant and very regular bearer; the fruit hanging in the richest clusters. And lastly, it is a very hardy tree—suited itself to almost any climate, where the plum will thrive.*

The Imperial Ottoman is a fruit of medium size, oval, and regularly formed. The skin is of a pale, semi-pellucid greenish yellow, a good deal marbled. In general appearance, the fruit approaches, somewhat, the Imperial Gage, but the skin is thinner and more transparent. It hangs for some time upon the tree, and though borne in thick clusters, does not incline to rot like some of the finer plums. The stalk and leaves are rather downy, and the former is slightly inserted. The skin is covered with a delicate whitish bloom; and the flesh, when fully ripe, scarcely adheres to the stone.

This plum is yet scarce in the nurseries, and we notice it here, in order to commend it to the attention that it really deserves. It is certainly among the best of the early varieties. The fruit raised in our garden last season, was pronounced by all who saw and tasted it, of very excellent quality.

JEEFERSON.—We have given our opinion respecting this noble plum in our work on Fruit Trees. Every year's trial confirms our high estimation of its merits. We perceive that it is now well tested in England, and equally admired there. Its size, beauty, and delicious flavor, are not its only re-

* Col. Henry Little, of Bangor, too well known for his pomological zeal to need further mention, informs us that it succeeds admirably as far north as Maine.

commendations. Its power of hanging a much longer time on the tree after ripening than any other plum of its class, without rotting or being attacked by wasps, is a point of great value. Wherever it has borne, the testimony is universal that it has on the whole, no superior among plums—and we are proud of its having originated in what must, indeed, be considered the very meridian for the growth of the plum—the upper half of the valley of the Hudson.

There has been an extraordinary demand for the trees of this variety during the past season. We are sorry to learn that in more than one case, the *Bingham* plum has been sold as identical with it. The latter is a totally different *clingstone* variety, and although a good fruit, is in no respect to be compared with the Jefferson.

CRAWFORD'S LATE MELOCOTON PEACH.—This is unquestionably the most magnificent of all yellow fleshed peaches. Last year afforded abundant additional proof that it is also one of the most profitable of all orchard varieties. We saw baskets of the fruit offered for sale in New-York, from which many specimens would measure nine and ten inches in circumference. As size, and beauty of appearance, tell better than any other qualities in the market, it is not surprising that fine baskets of this sort readily command three and four dollars each, when good peaches of the ordinary kinds were worth only 75 cents per basket. The tree is very vigorous, with handsome foliage, and bears very large and regular crops. It will probably drive the old Melocotons (*Malagatunes*) out of cultivation, as it is in every respect superior to it. It appears also one of the hardier sorts. We have seen specimens of the largest size grown almost without care, as far north as the neighborhood of Boston.

BELLE DE CHOISY CHERRY.—Certainly

this French variety, from the little village, whose name it bears, near Paris, is one of the most delicious we cultivate. It is of medium size, and is only a moderate (though very regular) bearer. But it is very beautiful with its thin, semi-transparent skin, and of the most delicate and agreeable flavor.

The Belle de Choisy is now very well known among amateur cultivators in most parts of the country. We are glad to learn from various accounts, that it proves to be adapted to a great variety of soils and climates—suited both the south and the north. This might indeed be predicted from its constitutional habit, which is that of the *Duke* cherries—only one remove from the Kentish or Morello—popularly known as **PIE CHERRIES**—the hardiest of all cultivated cherry trees.

It is a little remarkable, we may here say, that the cherry, which has the reputation of coming originally from Asia Minor, should be found a difficult tree to cultivate in our Southern States. All the finest *Heart* and *Bigarreau* cherries absolutely suffer in many parts of the south from the exposure of their trunks to the heat of the sun. The only remedy that we can suggest for those districts, is to keep the head of the trees low—plant them in northern situations, and *sheath the stems with straw*. The latter will, in most cases, prevent the distension and bursting of the sap-vessels, and splitting of the trunk, to which this tree, in all its more valuable varieties, is subject in such situations.

PEARS.—The pears which appear to have risen very highly in the public estimation during the past two seasons, are the *Beurré d'Aremberg*, the *Beurré Bosc*, and the *Dearborn's Seedling*.

The *Beurré d'Aremberg* is now almost unanimously acknowledged by our best



FIG. 1. VIEW OF A COMMON COUNTRY HOUSE



FIG. 2. VIEW OF THE SAME IMPROVED

cultivators, to be the first of winter pears for this climate. The tree, hardy, uniformly productive, and holding its fruit well; the fruit itself high flavored, maturing perfectly in all situations, and always keeping and ripening admirably; what better character is necessary to place it foremost among select and valuable varieties?

Among autumn pears, the *Beurré Bosc* proves, year after year, equally deserving of praise. Its branches are regularly laden with large, fair, and beautiful specimens, of a fine yellow, touched with a little cinnamon russet, which ripen gradually, and always attain a delicious flavor. With many sorts of pears, it is unfortunately the case that only one fruit in ten is a really fine specimen. With the *Beurré Bosc*, it is just the reverse; scarcely one in ten is blemished in appearance, or defective in flavor. It is, in short, a standard fruit of the highest excellence, and worthy of universal cultivation.

DEARBORN'S SEEDLING.—This most excellent little pear, raised by Gen. Dearborn of

Boston, has scarcely had justice done it. Its merits have been in fact *eclipsed* by the more showy qualities of the *Bartlett*, which ripens but a little later. Indeed, the *Bartlett* pear, from its unusual productiveness, size, excellence and beauty, as an early fruit, added to its vigor as a tree, and the rapidity with which it comes into bearing, has actually been the object of a sort of mania among those largely engaged in pear planting, within the last three years.

Notwithstanding this, Dearborn's Seedling deserves a place in every garden and every orchard. It is, we admit, not a large pear, but it is one of most excellent flavor, and bears such regular and enormous crops, that its moderate size is amply compensated for by the abundant quantity. As, like most pears, it is always best when ripened in the house, it will bear transportation to market well; and no one who makes an acquaintance with its flavor, will feel inclined to lay it aside for any competitor of its season.

RURAL ARCHITECTURE.

DESIGN FOR IMPROVING AN ORDINARY COUNTRY HOUSE.

No man has it in his power to say when or where he shall be born into the world. He has nothing to do with the conditions of his personal appearance. Whether he shall have the portly figure of John Bull, or the spare one of the walking skeleton; whether he shall be a giant or a dwarf; or belong to the Hottentot, or a Caucasian race; all these are matters over which he has no control whatever. Mankind are therefore forced to accept the conditions of birth as they find them.

But we are not equally obliged to follow

the law of necessity in all other conditions of life. A man is not always forced to be meanly clad, like the Esquimaux. He need not always live in a hut or a wigwam, like the Potowatomies. A civilized man will first make his habitation and his outward circumstances comfortable and convenient for all his wants. His reason teaches him to do this. He will then add something of grace and beauty to the objects that surround him;—to his dress—his house—and his grounds. The sense of the beautiful and perfect—attributes of the godlike, im-

planted in every man's heart—(vague and rudimentary though they appear in some,) will as inevitably lead him to this latter result.

Certainly there is nothing that more powerfully affects the taste and habits of a family—especially the younger members of it—than the house in which it lives. An uncouth, squalid habitation, is little likely to awaken that attachment to home, that love of good order, and that sense of propriety and elegance in social deportment, which are so much promoted, so much developed, by that home where a certain proportion, a certain fitness, and a sense of beauty, are every where visible.

It is not necessary to these conditions, that wealth should always be present; a log hut may, in its way, be made as tasteful as a palace. *Only is it needful that the mind should be alive to the superiority of a good form over a bad one*—that we should feel the mental pleasure of fitness, and the mental pain of clumsiness—in short, that we should be susceptible of the enjoyment of beauty, whether in the rainbow, the sunshine, smiling fields, or rural cottages and gardens, at least as constantly and strongly as we feel the mere animal pleasures of eating and drinking, sleeping and walking.

It will therefore be part of our duty in this journal, to explore further, from time to time, this field of progress, in the taste of rural dwellings, in which we have already labored.

It is not every man's fortune who lives in the country, to build a tasteful house for himself. Some care nothing for the form and appearance, so that there are rooms to live in, and a roof to cover them. Others have had no models to study, no works or architects to consult, and no capacity to design an agreeable dwelling.

There is a still larger class—those who

have bought or inherited a house which is too good to be sacrificed, and yet so devoid of every thing pleasing, that it does not satisfy a mind the least cultivated.

Such a house may be *altered*. Its whole character may be changed; and this frequently at a small cost, compared with that of building a new one. As we find the owners of the great numbers of houses of this class, are desirous of having suggestions for such alterations and improvements, we shall occasionally introduce examples of this kind, as well as those of a more distinct and original character.

In *figure 2*, (see frontispiece,) is seen a building that our readers will recognize at a glance, as the portrait of a plain country house, common in almost every neighborhood. Whilst there is perhaps nothing mean in the expression of this house, neither is there any thing in the least tasteful, or above the character of *common-place*. It belongs to the large class of dwellings whose presiding architectural genius is that of the "*bare and bald*."

In *figure 3*, is seen our proposed alteration and improvement of this house.

In the first place, to give spirit and character to it, we have boldly projected the roof, and ornamented the eaves. To give expression to the tame line of roof, we have added a small gable in front. The window pierced in this gable, will serve to light and render useful an additional room in the garret. For the meagre and insufficient porch, we have substituted a veranda ten feet wide, along the whole front; the shade and comfort of which in summer, makes it at least equal in value to any room in the house.

A part of the roof of this veranda, viz: that portion under the shadow of the gable, is finished with a tight sealed floor, so as to form an agreeable balcony to the central

window of the front. The windows themselves, (though this is not so important,) we should prefer to change from the common form, to that of the more expressive and cottage-like *lattice sash*, as shown in the engraving.

We think no one can compare these two buildings without confessing that the alteration confers a character of taste and picturesqueness on what was before a very ordinary and insipid building. The improvement does not involve any material change in the body of the house itself, but merely in those external parts easily altered and added to.

Let us add a few words on the details themselves, that we may be the better understood. The roof should project two and a half feet all round the house. This projection is easily made by taking off the siding directly under the eaves of the old roof—introducing pieces of joists as rafters; upon which, carry out the rafter boarding, and piece out the roof to the necessary breadth.

The verge boards, or eave boards, (i. e. the ornamental piece running round below the outer edge of the roof,) must be cut out of sound *two inch* plank. It is the besetting architectural sin of half the carpenters in the country, (and more especially those in New-England,) to make these portions of a

rural cottage of *thin boards*. Nothing gives a cottage, otherwise good, such a rickety, *paste-board-ish* air. The spirit of the carvings and ornaments of the gothic villa, of which these cottages are modified forms, is that of elegant solidity—not “*gingerbread*” flimsiness.

The supports of the veranda are simple solid posts or columns, six or eight inches in diameter, left square for base and capital, and hewn to an octagon in the shaft. The arch which runs at the top, from one to the other, is cut from two inch plank.

Nothing is heavier and less agreeable than the common square chimney. We would therefore advise the owner of *figure 2*, to complete the alteration by adopting the simple form of carrying up distinct flues, standing on a common base, and connected at the top, as we have shown in *figure 3*. The expense is but little more than in the common mode, and the effect far lighter and more agreeable.

ESTIMATE.—The cost of the proposed alteration of this house, will vary from \$400 to \$700. The cost of lumber and of the mechanic's labor, varies so widely in the different States, that it is impossible to give an estimate which will be an accurate one, for any two sections of the country. Where we write, the whole could be completed in a workmanlike manner, for about \$550.

THE TWO NEW ORNAMENTAL TREES.

Two new ornamental trees have lately made their appearance in our gardens, which are attracting the attention of all amateurs. They both appear to be quite hardy in this latitude, and will undoubtedly add greatly to the beauty of our lawns and plantations. These are the *Paulownia*, and the *Deodar Cedar*; the former, a fine deciduous tree, with the general habit of the Catalpa; the latter, a noble evergreen, with the grand character of the Cedar of Lebanon. Some account of each of these trees may be acceptable to our readers.

The Imperial Paulownia is one of the plants lately brought to Europe from Japan, by Dr. Von Sieboldt, the Belgian botanical

traveller. In its native country its local name is *Kirri*; and the Chinese call it *Tso-Mak-Too*. It forms a tree, in Japan, about 30 or 40 feet high, with a trunk two or three feet in diameter. The bark is smooth and light colored. The branches are rather few in number, spreading horizontally and forming a large head.



Fig. 4. THE PAULOWNIA.

Paulownia imperialis. Sieboldt & Zucc.
Schreopentariaceae. Lind. Veg. King.

The striking peculiarity of the Paulownia, however, is its showy foliage. The leaves are of the shape of those of the Catalpa, but of a darker green, perhaps resembling more closely those of a large sunflower—being broad and heart-shaped. In rich soil, the growth of the tree is extremely rapid—young plants making shoots of 8 or 10 feet in a season, and on such, we have measured leaves a foot and a half in diameter. But on older trees, they are usually about half that size.

The flowers are produced in April, in panicles, at the ends of the branches. They

resemble in general appearance those of the Catalpa, but the color is a pale bluish-violet. The seeds are borne in an oval capsule as large as a pigeon's egg.



Fig. 5. Blossoms of the Paulownia. 1-4th the natural size.

When the Paulownia was first introduced into the Garden of Plants at Paris, it was treated as a delicate green-house plant. It was soon found, however, that it was perfectly hardy on the Continent and in England. In this country it appears equally so. The trees in this latitude have stood the past two winters, even in exposed situations, without covering, and have not lost an inch of the previous season's growth. We therefore consider it a hardier tree than the Catalpa, which often suffers badly from the cold of this latitude. Nothing is easier than the propagation of this tree. Single buds will grow, like those of the Mulberry and the Vine, taken off early in the spring and covered about an inch deep in the soil of a fresh hot bed. The cuttings of the young shoots, planted under a hand-glass in a shady border, strike root readily. But by

far the easiest and most rapid mode is that of planting pieces of the roots.

Every little piece of the root of the Paulownia will, under certain conditions, produce a plant. It is only necessary to make a common hot-bed early in the spring, reduce the roots of the parent tree, (and it will bear a very severe reduction,) and plant every piece that will make a cutting not smaller than a goose-quill, and a couple of inches long. Plant these bits of roots about an inch and a half deep in the rich, light s il of the hot-bed. In a fortnight's time, every bit will throw up a bud, make new roots, and become a distinct plant. When the plants are about three inches high, they may be transplanted into rows, beds, borders, or, in short, wherever they are finally to grow. If the season is favorable, they will grow to the height of from three to six feet before the close of the autumn. Next year, if the soil is deep, they will make shoots eight or ten feet long.

When the Paulownia was first offered for sale in Europe, about three years ago, it was advertised by the Brothers Baumann, the great nurserymen of the Rhine, at from three to six *guineas* per plant. From the rapidity with which the nurserymen are propagating it now, in this country, we have no doubt it may be bought next autumn at wholesale, at about the same price per hundred trees.

The parent tree, in the *Jardin des Plantes*, Paris, has already borne seeds in considerable quantity, which have vegetated very regularly. The tree has not yet, to our knowledge, flowered in this country, but will probably do so next spring. As soon as the seeds are produced in abundance, we advise cultivators to resort to them—the best of all modes of propagating ornamental trees—when it is possible to do so.

THE DEODAR CEDAR.

Cedrus Deodara. Roxburgh.

Pinacea. Lind. Veg. Kingdom.

The Deodar Cedar is the glory of the Himalayas. Bishop Heber describes it in one of his letters as “a splendid tree, with gigantic arms and dark narrow leaves, which is accounted sacred, and chiefly seen in the neighborhood of ancient Hindoo temples, and which struck my unscientific eye as very nearly resembling the Cedar of Lebanon. I found it flourishing at nearly 9,000 feet above the level of the sea, where the frost was as severe as in England.” *Deodara* or *Devedar*, is the local name in the Hindoo country, and signifies *Tree of God*. It is used there as the incense fuel; but is also considered one of the most valuable sorts of Indian timber. In the Penny Cyclopaedia, it is stated that specimens were taken from a bridge in Ladak, where they had been exposed to the water for 400 years.

Of course, the Deodar Cedar will only be interesting to our readers as an ornamental tree. Specimens are growing at this moment in many collections in this country; and so far as we learn, it is perfectly hardy to the southward of this latitude, though liable to be injured by the winter at the north. South of New-York, it will certainly form one of the most beautiful of ornamental trees.

The general habit of this tree, as has been already remarked, is that of the Cedar of Lebanon, which it most nearly resembles. Its foliage, however, is larger, of a lighter, more silvery hue, and the branches have more of a drooping habit and more feathery lightness than the Cedar of Lebanon. The fact that it grows much more rapidly, will serve as an additional recommendation to the lover of fine trees.

This is still a very rare tree. There are



Fig. 6. The Deodar Cedar.

yet no specimens in America over a few feet in height. The accompanying portrait

is from the *Annals of Horticulture*, and represents an English specimen about ten years old. We add the following note from the same work:

"The cones of this tree resemble those of the Cedar of Lebanon, and are ripe in the months of November and December, when they fall off like the Silver Fir cones. They may be crushed into pieces even with the hand, and the seeds are then easily picked out; the good ones are plump, whilst those which are useless, are flat and shrivelled. During the month of May, a light friable piece of ground should be selected, (and in the climate of England it will be all the better to be shaded,) and after being dug and raked, the seeds should be sown in beds in the same way as Larch seeds are sown, viz: by covering them to the depth of two-thirds of an inch. The plants will appear in June, and in those beds they may be allowed to remain two years, keeping them free from weeds; they should then be transplanted into lines, and treated in every respect the same as the common Larch tree. The system of keeping them in houses is just as absurd as growing the common Scotch Pine in heat, or any other plant which is equally hardy."

THE BEST FIVE WINTER PEARS.

BY THE PRESIDENT OF THE MASSACHUSETTS HORTICULTURAL SOCIETY.

MR. DOWNING—You ask me for the results of my experience as to what I consider "*the best five varieties of winter Pears.*" I comply at the spur of the moment. I regret that at the present time my engagements will only permit of devoting the passing hour to the subject, and will necessarily compel me to pass more hastily over it than I could wish, for one of its importance.

The list, however, is made up from many years' experience with the varieties named; all of which, I can confidently recommend as worthy of extensive cultivation. For more particular descriptions than will be found in the following remarks, reference may be had to the various Pomological works of the day. I commence with that "*Prince of Pears,*" the

Fig. 7. *The Beurré d'Arenberg.*

1. BEURRE D'AREMBERG.—This variety has, for the last ten years, never failed to yield me an abundant crop of its delicious fruit. It has as often been exhibited at the rooms of the Massachusetts Horticultural Society, always receiving the unqualified approbation of our most experienced amateurs and cultivators. Possessing all the characteristics of a first rate table pear, it retains at maturity, its flavor and *champagne* sprightliness, with all the freshness of a specimen just plucked from the tree. The foliage and fruit adhere with a remarkable tenacity, resisting the frosts and gales of autumn better than those of most other varieties. As a constant, prolific, hardy sort, the d'Arenberg is unsurpassed, and whether

on the pear or quince stock, proves admirably adapted to this climate. It keeps as well as a Russet apple, and requires no further care than to gather in a dry day, and pack at once from the air, in close boxes or barrels—with no other precaution, it has been found in a state of perfect preservation in the month of January. Season, December to February. The Beurré d'Arenberg is a fruit easily excited to maturity, and may be brought into eating in November, or retarded until March.

2. WINTER NELIS.—This is classed second in my list, not from any inferiority to the first named variety; for in fact, as a sweet, melting winter pear, it has no equal. Connoisseurs generally prefer the brisk,

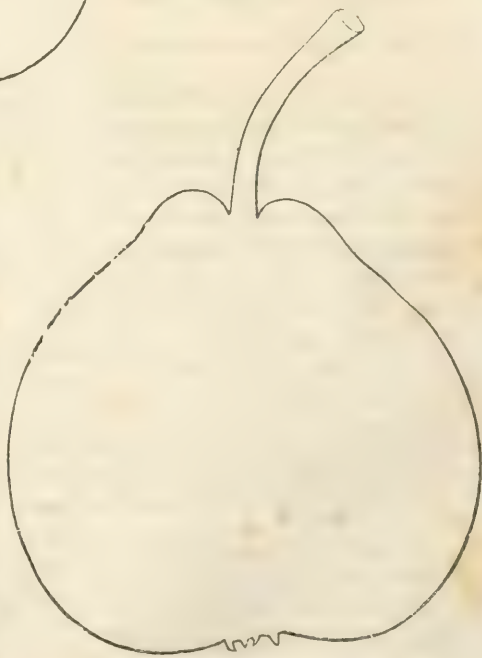
Fig. 8. *The Winter Nelis.*



Fig. 9. *The Columbia*, with the stem shortened.

vinous juice of the d'Arenberg, but some of our good judges esteem the Nelis above all others of the season.

The growth of the tree is not strong, but more so on the quince, to which it seems well adapted; it is hardy and thrifty in rich soils, otherwise the shoots are more stinted and feeble than is usual with most other sorts. To obtain specimens above medium size, requires high cultivation and some thinning of the fruit. Keeps and ripens well, and bears good crops. Season, November to January.

3. COLUMBIA.—This excellent native variety has proved with me a fruit more uniformly smooth, perfect in shape, and free from the depredations of insects, than almost any

other sort. The tree is thrifty and hardy, not prolific when young, but a great bearer on mature subjects, the fruit being regularly distributed over the branches, and of very uniform size. I was so much pleased with this variety when it first came to my notice, that I despatched a special messenger from the city of New-York, to the owner of the original tree in Westchester county, for half a bushel of the pears; and I did not regret the expense of twelve and a half dollars, when I consider the acquisition of such a fine American variety. My

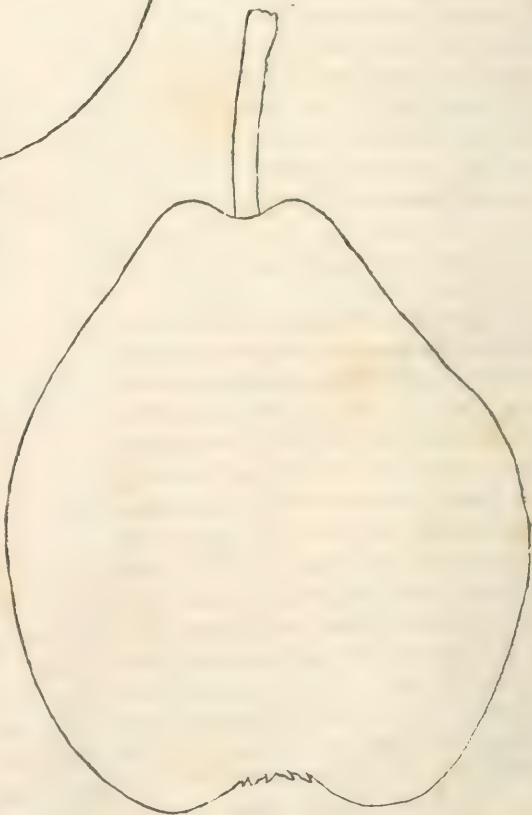


Fig. 10. *The Glout Morceau*.

Beurré Diels were then in eating, and I judged the Columbia of equal quality; since which, however, I have seldom seen it so good. Ripens about the first of January; of a clear lemon yellow, very handsome, and may be kept two or three weeks in this state. Its beauty will give it a ready sale, and its quality and its merits, on the whole, if not as high as our first impression, will prove perfectly satisfactory.

4. **GLOUT MORCEAU.**—This pear, under the name of Beurré d'Arenberg, is more universally cultivated in France, as a winter fruit, than any other variety. It is truly an excellent, rich, sugary pear, and is not unworthy of the appellation given it. The tree is hardy, a great and constant bearer; but it requires, like most pears, good cultivation. Few varieties succeed so well on the quince, as the Glout Morceau; a tree of which, in my own ground, annually produces a barrel of large perfect fruit; this is clear waxy yellow, and very handsome at maturity; keeps into the winter months, with ordinary care; commands as good a price in the market, and is esteemed by many, equal to the Beurré d'Arenberg. It varies much in form. In growth, it is more luxuriant on the quince; the large specimens frequently having a very thick, short stem, set angularly on the fruit, with the peculiar knobby appearance of the d'Arenberg. On the pear stock, and under medium cultivation, the stem is smooth and straight, as figured by Thompson in the Gardener's Chronicle, and Downing in the Fruits and Fruit Trees of America. From this circumstance, the present subject has

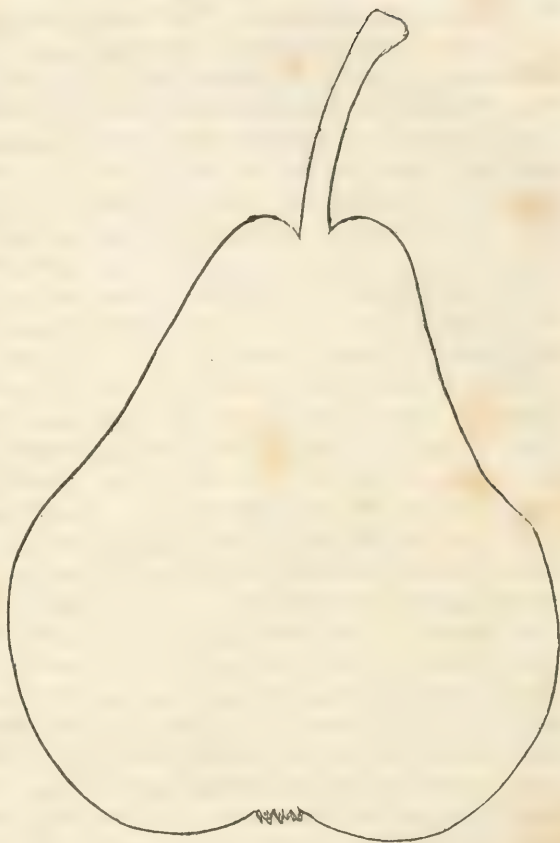


Fig. 11. *The Passe Colmar.*

been confounded with the Beurré d'Arenberg. Season, December and January.

5. **PASSE COLMAR.**—As a hardy, vigorous, excellent pear, the Passe Colmar has few superiors. It is prolific to a fault, and requires judicious management. To insure fruit corresponding to its character in the Catalogue of the London Horticultural Society, "first size, and first quality," it is necessary to commence the trimming process as early in the season as the best specimens can be distinguished, or the pruning out of half the fruit bearing spurs in the month of March, as recommended by the late Mr. Manning, will contribute to relieve the tree

of its overbearing propensity. The French make two varieties of this pear, viz: *Passe Colmar gris*, and *Passe Colmar doré*. I have never discovered any difference in the fruit of these trees, that only which is exposed to the sun, having the golden color alluded to, the beauty of which is sometimes with us further enhanced by a red cheek.

This tree makes long weeping branches, and frequently sets a second crop of fruit, which should always be removed.

Ripens gradually from November to February, but may be kept later, large and beautiful specimens having been received by me from New-Bedford, as the *Colmar d'Hiver*, on the 18th day of March.

Without the adoption of the system of culture here recommended, this variety will generally prove unsatisfactory.

An inquiry will no doubt arise in the minds of some of your readers, why the Easter Beurré has not found a place in the above list. My answer is, that although we obtain some specimens of first rate excellence, yet this variety has generally proved so variable and uncertain that it cannot from our experience at present, be recommended for general dissemination. It however succeeds better on the quince.

Respectfully yours,

MARSHALL P. WILDER.

Boston, June 1, 1846.

.....

REMARKS.—If our pomological readers, and the novice just commencing a fruit garden and orchard, attach any importance to *experience*, and the simple results of the best *practice* in the country, then they may look upon the foregoing article by Col. Wilder, as one, every word of which is of

sterling value. In all our various examinations of the orchards and gardens of this country, we have no where seen the general cultivation of the pear more entirely successful than in the garden of the President of the Horticultural Society of Boston. But what is of far more consequence to the public, is the fact that, unlike many amateurs whose sole delight seems to be to collect and retain possession of *every thing*, whether good, bad or indifferent, that bears a name, our correspondent exercises his judgment and his reason in openly repudiating sorts of poor quality, and bearing a candid and impartial testimony in favor of the few sorts really good.

Our readers will notice that under the head of Glout Morceau, Col. Wilder has pointed out the cause of the variety of opinion as to the form of that pear, as compared with the Beurré d'Aremberg. The *normal* form of the Glout Morceau when grown on a pear stock, is that figured in our work on Fruits and Fruit Trees, page 437. Often when grown on a *quince* stock, it takes the figure of the d'Aremberg, as shown by Mr. Hovey in his Magazine.

The flavor of the two fruits, and the growth of the respective trees, however, distinguish them perfectly at all times. The Glout Morceau is a pear of sweet and honeyed flavor, like the Doyenné or St. Michael; the Beurré d'Aremberg of vinous flavor, a rich mingling of sugar and acid, like the Brown Beurré, or in its own perfection, more like a Pine-apple. Again, the spreading, depending shoots of the Glout Morceau, and its somewhat wavy leaves, mark the distinctness of the tree at a glance, from the more erect habit of the Beurré d'Aremberg.—Ed.

THE AMERICAN ARBOR VITÆ FOR SCREENS AND HEDGES.

BY THE FOREMAN AT THE HIGHLAND GARDENS.

EVERY one having the care of grounds in the country, is aware of the want of some good, rapid growing, evergreen plant, for screens and for hedges—something to hide unsightly objects, and to serve as a kind of thicket between one part of a place and another. Unfortunately, in this climate, the Hollies, Portugal Laurels, and other beautiful evergreens of Europe, will not succeed. But there is one native evergreen, which stands admirably in their place, making the most perfect screen, and with the least possible care and trouble. The undersigned, therefore, proposes to offer a few remarks on its merits to the readers of the Horticulturist.

In the first place, he would remark, the ease and success with which it may be transplanted. When grown in loose nursery ground, where it can be taken up without injuring the roots badly, not one in one hundred, ever fails; and even in its native localities, when taken up with ordinary care and kept damp, and covered from the sun and drying winds until again planted, the failures are in general very few.

In the next place, the little care required in its after management, or in other words, the *no care at all* required—unlike the evergreens of Europe above spoken of, which require such frequent pruning and trimming, to keep them in shape. One of the finest screens the writer ever had the pleasure of seeing, is one of this kind growing here. The plants have never had a shears or knife applied to them for the purpose of pruning or trimming, since they

were first set out: this is now 12 or 15 years. The screen is now 16 or 18 feet high, and almost as symmetrical and regular as if clipped annually with a hedge shears.

Another superior qualification possessed by the native Arbor Vitæ, is its freedom from disease, or tendency to decay—in many hedge plants, and even the Red Cedar, some of the hardiest branches, and occasionally whole trees, die off without any apparent cause; neither does it ever suffer from the effects of winter, like the Chinese Arbor Vitæ, and many other plants. It is a fact that such a thing as a dead tree or branch is never seen, even in its native localities, unless broken or injured in some unfair manner; add to this, that insects never attack it, and its longevity is very great. Another character peculiar to the Arbor Vitæ is, that in summer, when many evergreens look brownish, compared with the foliage of some of the deciduous trees, its beautiful verdure will not suffer in comparison with the most lively green of June foliage.

The foregoing remarks have reference to the American Arbor Vitæ as a screen plant. But as a hedge plant, its claims are even greater, one qualification only lacking, that is not being sufficiently impervious, in localities where the quadrupeds, and even bipeds, are not sufficiently *domesticated*; even in such localities, depredations from the former may be prevented, by having a low, cheap board fence, or what would be much better, if the beautiful and cheap wire

fence, so much used in England, were introduced among us more, which does not mar the beauty of the hedge, and at the same time answers the purpose of protection. With either of the above precautions, the Arbor Vitæ may be made to answer every purpose as a hedge plant; the expense and trouble in keeping Hawthorn and such hedges, free of weeds, and the frequent use of the hedge shears, not required in the after management of the Arbor Vitæ, would more than balance the expense and trouble of the protection required by the latter, in localities exposed to much trespass. Finally, its exemption from all the pests that prey upon the Hawthorns, such as borers, aphids, blight, &c. &c., and its being an evergreen, which is not the case with the *Cratægus*, *Gleditschia*, *Maclura*, &c. &c., renders it incomparably superior to any other

plant for this climate, as an evergreen hedge plant.

A. SAUL.

Highland Gardens, Newburgh, June, 1846.

.....

REMARKS.—The Arbor Vitæ of this part of the Hudson river, is so distinct in its habit, and so peculiar in its symmetrical growth, that we are more than half inclined to think it a distinct variety. It forms, without any pruning, a regular, conical tree, of from 10 to 30 feet high, feathered thickly with branches quite down to the ground. Certainly nothing can well be more perfect or beautiful, than a well grown hedge or screen of this tree. We look upon it as standing at the head of all evergreen hedge plants for this country; as we do upon the Buckthorn (*Rhamnus catharticus*), as the very best of deciduous plants for our use.—Ed.

Some Account of the Origin of the Boston Nectarine.

BY SAMUEL G. PERKINS, BOSTON.

[THE following account of the origin of this very handsome fruit, we extract from a letter from our veteran horticultural friend, S. G. Perkins, Esq., a gentleman for whose profound practical knowledge, especially in all that relates to the culture of fruit trees, we entertain the highest respect. He who wishes to see the *espalier* culture of fruit carried to its highest perfection, in a way, too, the most rational, simple, and unexpensive, can no where pass so instructive an hour, as in the garden of this gentleman, in that most beautiful of all suburban neighborhoods, Brookline, near Boston.—Ed.]

.....

This fruit—the Boston, [or Lewis, or Perkins' Seedling, as it is often called] I obtained from Mr. T. Lewis of Boston—in whose yard it was produced, from the kernel

of a peach stone, as he and his mother both informed me, they, at the time it first bore fruit, never having seen a Nectarine. Mr. Lewis, as the tree came forward, always supposed it would produce what is called a peach; but on seeing, when it first appeared, this beautiful fruit, with a smooth skin, was impatient to know what it was, and carried it to the late Mr. S. Pomeroy, who was then the leading cultivator of fruits in this region. Mr. Pomeroy brought it to me, for although he knew it to be a Nectarine, he had never seen any so large, and as I then had the Red Roman in perfection, he wished to compare it.

I immediately obtained buds from the tree for Mr. Pomeroy and Mr. Preble, as well as myself. All these failed—mine alone being preserved. The original tree

from which they were taken, was unfortunately soon after destroyed by boys—plunderers of the fruit. It was purchased the same season by the gardener of Gardiner Green, Esq., who paid fifty dollars for it as it stood. To protect it, he immediately built a fence high enough, as he supposed, to prevent the boys from reaching the fruit. It had the contrary effect—attracted their attention, and they pulled down fence, fruit and tree—totally destroying the latter, so that the only shoot of it living was in my vinery. From this tree in my vinery, I raised fruit for nearly 20 years, but I had also others coming forward.

In 1821 or 1822, I sent one or two trees to the Horticultural Society of London, of which I was a corresponding member. I also sent them a painting accurately representing one of the Nectarines, *that measured eight and a half inches round*. The fruit represented was so superb, that they doubted its being a correct portrait, until it had borne fruit in their own garden. If

you are in our neighborhood in the early part of August, I shall be happy to show you three trees now in fruit, covering 55 feet of my wall, as firm and as beautiful as that represented in the painting sent to the Horticultural Society of London. These trees are all of them seedlings of my own raising, and are quite the same as the original tree, the Lewis, the Perkins' Seedling, and the Boston, being all the same fruit, differently called in various places. The name Boston was given by the Horticultural Society of London.

With regard to the original tree found in Mr. Lewis's yard, I have no doubt that it was really the product of a peach stone; for we know very well that such instances are on record, and that a Nectarine is nothing more than a *smooth skinned* peach; the stone of a downy peach may produce occasionally a peach without down.

Respectfully yours,

SAMUEL G. PERKINS.

Brookline, near Boston, April, 1846.

A Preventive to the Mildew in the Gooseberry.

BY NEW-JERSEY

DEAR SIR—Almost every body is discouraged with trying to raise the Gooseberry in this country, on account of the *mildew* or *rust*, which destroys the fruit. I have made a good many experiments for the last 15 years, to find out, if possible, some simple mode of preventing this, but entirely without success, until three years ago, I hit upon a mode which has given me great satisfaction in growing this fruit.

My mode of preventing the mildew, is very simple. It consists in covering the soil under the bushes with salt hay about three inches thick. This should be done early; say when the blossoms begin to

open. Whether it acts as a shield to preserve the roots, and thereby the whole system of the plant, from the sudden changes of weather, which the scientific say bring about the mildew, or whether it acts as a stimulant, I am not able to say.* It is sufficient for me that I have never had the least appearance of mildew under the bushes which I have treated in this way, since I began to apply it; while others in the same

* The salt does not, we think, act *specifically* in preventing mildew; as we have tried it, spread upon the soil, with no effect. Yet we have heard such good accounts from several persons this season, of this very mode of using salt hay, that we think very favorably of it, and recommend it for trial.

garden have been totally covered with it. I leave the salt hay on all summer. By autumn, it is pretty well rotted, and I then dig it in, and it promotes the growth of the tree next year.

If you think this simple mode of preventing mildew, which I have found so successful, will interest your readers, I shall be glad to have it made public in the *Horticulturist*.
NEW-JERSEY.

Notes on the "Black Fig" of the Azores: Culture of the Fig under Glass.

BY JOHN FISK ALLEN, SALEM, MASSACHUSETTS

[HAVING heard of a very prolific and excellent new Fig, grown by J. F. ALLEN, Esq., of Salem, Mass., we requested that gentleman, one of the many zealous gardening amateurs in that city, to favor us with something of the history of this variety, to which he has very kindly added some interesting notes on the culture of the Fig, for the benefit of our readers.

Mr. Allen had the goodness to send us some plants and ripe specimens of the "Black Fig," which we found of medium size and excellent flavor. Annexed is a drawing of one of the fruits, from the latitude of the Azores: we should be inclined to give this sort a trial in the open air in this latitude.—Ed.]

.....

The Fig I cultivate, was imported from St. Michael, Azores, in 1836, under the name of "Black Fig;" how it came into the Island, or from whence, is not known. It has been grown there at least, for as long a time as is within the memory of one of the oldest residents of the Island. When received by me, the original tree was in a tub, and remained in it for two or three years, ripening ten to twenty fruit each season. It was then planted on the back wall of a green-house, and trained horizontally; it grew rapidly, and has yearly ripened from two to five hundred fruit. The first crop, which is the least, comes on in March



Fig. 12. *The Black Fig of the Azores.*

and April; the second and third, the chief crop, and best in quality, from 20th May to 1st July; ripening every two or three days ten to twenty. This house is used for forcing grapes, which forcing is commenced 1st of December, and the rafters are covered with vines, which ripen the grape from April to June; the tree, after winter pruning, covers the wall 10 feet in height, and 10 feet in width. At the present time, June, 10 feet high, and 18 feet wide, and has not less than 400 fruit, in all stages, on it.

CULTIVATION OF THE FIG UNDER GLASS.—
The fig is very easily grown; it requires a good, rich, strong soil in a moist location. It

is a gross feeder and strong grower, and it succeeds better than any other fruit, on the back wall of a grapery, not minding the shade of the vine. The second and third, or principal crop, is produced on the current year's wood. To produce fruit, the wood does not require to be well ripened, as does that of the grape; but as soon as the shoot has made 12 to 18 inches growth, and the leaf is well expanded, the fig pushes from this new wood at the eye, formed at the foot-stalk of the leaf. The first crop of figs appear thickly over the last year's wood, but there being no leaf to perfect the fruit, it mostly drops or ripens imperfectly—a few only of those favorably situated, ripen well.



Fig. 13. The tree at the end of the first year.

The growth of the tree should be encouraged by training, nearly upright, the shoots,

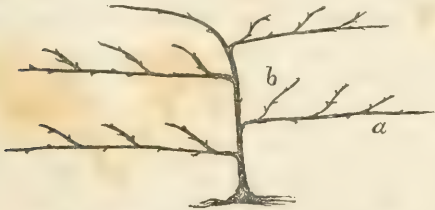


Fig. 14. The tree at the end of the second year.

the first season, and other shoots in after seasons, until you have the wall covered

sufficiently. The second season, the last year's shoots should be trained horizontally (*a*) to make the eyes push the bearing spurs, (*b*) for on these you are to get your main crop. Lay those in, as soon as they are long enough, and the fruit will soon appear. At the winter pruning, stop the leader as far back as you think best, say at *e*, and cut in all the bearing wood or spurs, to one inch or more, (see cross cuts *f, f*), using your judgment as to the proper spot; making sure there is an eye to start.

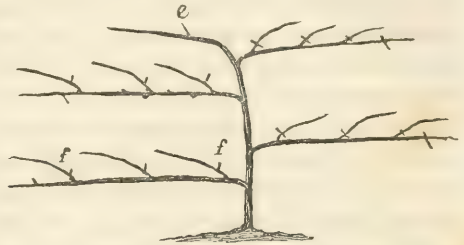


Fig. 15. The tree at the end of the 3d year, showing how it is to be trained.

The *scale* is the most troublesome insect on the Fig. To keep it under, the wood, after winter pruning, must be covered all over with a composition made of soft soap, wood ashes, and a small quantity of tobacco water; the latter, made by steeping in hot water. Put the whole on cool, about the consistency of cream.

In tubs, under the vines, in a grapery, a fair crop may be had, if proper care be taken to water occasionally with liquid manure; always remembering that *if the Fig suffers a check for want of food or moisture*, it will certainly drop its fruit.

FRUIT IN MASSACHUSETTS.—The town which raises the greatest *quantity*, is Wilbraham, Hampden county, amounting to 51,832 bushels. West-Cambridge, next, raises 50,240 bushels. Then follows in course, Danvers, Newbury, Hopkinton and Roxbury. As

far as *value* is concerned, Brookline stands first, being \$37,840; West-Cambridge, \$25,175; Watertown, \$20,000. Nearness to market may affect materially the value of fruit; and fine, or very early varieties, may sell for ten times as much as ordinary kinds.

HOW TO RAISE "GIANT" ASPARAGUS.

BY T. B. NEW-YORK.

MR. EDITOR—There are sold in the seed-stores, several sorts of Asparagus, which claim to grow to unusual size, and produce giant stalks. I have bought and planted these sorts, and have found them not perceptibly different from the common old sort.

I want to tell you and your readers, if you will have a little patience with me, how I grow common Asparagus, so that it will always rival any giant production, whether from Brobdignag or Kentucky. Every one who has seen my beds, has begged me for the *seed*—thinking it a new sort—but I have pointed to the *manure heap*—(the farmer's best bank)—and told them that the secret all laid there. The seed was only such as might be had in every garden.

About the 1st of November—as soon as the frost has well blackened the Asparagus tops—I take a scythe, and mow all close down to the surface of the bed; let it lie a day or two, then set fire to the heap of stalks; burn it to ashes, and spread the ashes over the surface of the bed.

I then go to my barn-yard; I take a load of clean, fresh stable manure, and add thereto, half a bushel of hen-dung; turning over and mixing the whole together, throughout. This makes a pretty powerful compost. I apply one such load to every twenty feet in length of my Asparagus beds, which are six feet wide. With a strong three pronged *spud*, or fork, I dig this dressing under. The whole is now left for the winter.

In the spring, as early as possible, I turn the top of the bed over lightly, once more. Now, as the Asparagus grows naturally on this side of the ocean, and loves salt water, I give it an annual supply of its

favorite condiment. I cover the surface of the bed about a quarter of an inch thick with fine packing salt; it is not too much. As the spring rains come down, it gradually dissolves. Not a weed will appear during the whole season. Every thing else, pig-weed, chick-weed, purslane, all refuse to grow on the top of my briny Asparagus beds. But it would do your eyes good to see the strong, stout, tender stalks of the vegetable itself, pushing through the surface early in the season. I do not at all stretch a point, when I say that they are often as large round as my hoe handle, and as tender and succulent as any I ever tasted. The same round of treatment is given to my bed every year.

I have a word to say about *cutting* Asparagus, and then I am done. Market gardeners, and I believe a good many other people, cut Asparagus as soon as the point of the shoot pushes an inch or two through the ground. They have then about two inches of what grows above ground, and about four or six inches of what grows below. The latter looks *white* and tempting; I suppose people think that for the same reason that the white part of Celery is tender, the white part of Asparagus must be too. There is as much difference, as there is between a goose and a gander. It is as tough as a stick; and this is the reason why people, when it is boiled, always are forced to eat the tops and leave the bottom of the shoots on their plates.

My way is, never to cut any shoots of Asparagus below the surface of the ground. Cut it as soon as it has grown to proper height, say five or six inches above ground. The whole is then green, but it is all *ten-*

der. Served with a little drawn butter, it will melt in your mouth. If your readers have any doubt of this, from having been in the habit, all their lives, of eating hard sticks of white Asparagus, only let them cut it

both ways, and boil it on the same day, keeping the two lots separate, and my word for it, they will never cut another stalk below the surface of the bed.

Yours, &c.

T. B.

Climbing and Pole Roses for Hardy Culture.

BY ROSA, OF PHILADELPHIA.

[THE following remarks on *Climbing Roses*, are from the pen of one of the most distinguished Horticulturists of Philadelphia, whose knowledge on this subject is very full and complete. We hope to see his communications frequently in our pages.]

.....

The cultivation of the Rose has been a favorite object for many ages. As time passes, the interest increases; every year bringing to our notice some new feature, some special favorite in color or character. Every year develops some new branch of the art of hybridising, and by its means, offers us new attractions, and attains grander results.

Under the head of *Climbing Roses*, allow me to cull my own flowers, and select my plants from any of the families of the tribe, to accomplish my object. The Rose family has become one of such boundless extent, that I shall, for the present, confine my remarks to a few of the most desirable of those of larger growth.

Roses were formerly all alike indifferent; having a few meagre petals, distorted with the least toss of the wind; now we have choice of every grade and color, large or small, and so brilliant that they can be seen a mile off, forming objects that the most indifferent observer must admire. On my table lie 24 flowers; few, or none of them rare; all can be easily obtained; they em-

brace every color, from pure white to dark crimson purple, selected from several families, all adapted to any situation, and will grow from 3 to 30 feet each year; but to produce this growth, the ground must be in prime order, rich and mellow—loam and well rotted manure, half and half, well incorporated; the ground requires also to be of a dry nature, not subject to be inundated with water. Having such material and situation, success will follow; and it may be observed that plants of two years' growth will be more successful than those of five or six years.

BLANCHEFLEUR, hybrid China. Pure white, of a very double compact form; an abundant and early bloomer, adapted to a pole of six feet; very hardy.

MADAM D'ARRELY, hybrid climbing. Will grow to any extent; the flowers are white, in exuberant clusters; foliage large and dark green; excellent for an arbor or covering any object. I saw a plant to-day, trained in pillar form, at least 16 feet high, with its thousands of snowy blossoms, backed by a noble purple-leaved beech, forming a striking contrast.

BALTIMORE BELLE, Prairie. Pale waxy blush, very double, in large clusters; in growth, almost equal to the former, and a few days later into bloom; perfectly hardy, and will withstand, with all the *Prairie Roses*, the coldest climates, or the hottest suns.

DE LISLE, BLUSH BOURSAULT, &c. The earliest of roses, producing exceedingly large flowers, with a deep rose centre, and perfectly double.

PALLIDA and SUPERBA, *Prairie*, are different, but certainly very much alike, requiring close observation to detect any distinction; they are both blush, inclining to pink. *Pallida* has the color most in the centre.

YOULAND D'ARRAGON, *hybrid perpetual*. Is of a fine deep blush, a rare color in the family; grows strongly, and blooms repeatedly during the season; it makes a beautiful pale rose of about five feet, quite fragrant.

PRINCESS, *hybrid China*. "A rose without a thorn;" rosy blush, blooming in clusters; a late variety, admired for its delicacy of color and fragrance; a plant suitable for a pole eight or ten feet high.

PHILLIPAR, *Noisette or Bourbon*. Of a hardy nature, admired for its profusion and peculiar rosy lilac hue, blooming without intermission from June till November. I have seen a plant covering a fence twenty feet long, and eight feet high, and for five months never without a flower.

LA TOURTERELLE, or DOVE ROSE, *hybrid China*. A variety that keeps in bloom for a length of time; is very early, large cup shaped, perfect, always fine and fragrant; of a purplish lilac or dove color; it will cover an arbor or pole of 18 feet in a few years.

GRILLORY, *hybrid China*. Is of a peculiar shaded, rosy violet color, the flower of the largest size, with petals bold and well rounded. When in bud it is most magnificent, but the flower and color very soon fades. It suits a pole of eight feet.—(*To be continued.*)

FRUITS IN WESTERN NEW-YORK.

BY W. R. SMITH, OF MACEDON, N. Y.

THE original settlers of the "Genesee Country" frequently supplied themselves with fruit, by planting unimproved trees, raised from seeds brought with them. It is reasonable to suppose that these were generally selected from favorite and superior kinds.

For many years, cider was considered one of the most profitable farm products; and this occasioned the planting of natural or cider fruit to an indefinite extent. From the many varieties thus produced, some of inferior quality have been propagated. Others, possessing merit, have, I think, been over-praised; while others, again, will be considered as acquisitions to the choicest collection.

The design of this, and by permission, of subsequent communications, is to throw

such light upon this interesting subject, as I may be able, and to assist in forming a correct estimate of the value of kinds under notice.

THE NORTHERN SPY.—The description of this fruit, when in perfection, is too well known to need a repetition. It has many excellent qualities, such as good size, fine appearance, and high flavor, with a grateful freshness during the spring months, when well kept. This commendation applies, however, only to specimens grown under favorable circumstances; that is, upon young trees. It seems not to have been noticed publicly, except by the editor of the Western Reserve Magazine, that as the tree advances in age, the fruit almost correspondingly deteriorates. I have this, upon the authority of several intelligent culti-

vators, and my own observations accord therewith. Last autumn I visited several orchards where this variety was raised, and among these, that of Timothy Buell, Jr., East-Bloomfield. Here were trees, which had been grafted about twenty years, were well pruned, healthy, and in good soil, though under grass. The apples were about one-fourth the size usually described. Under the same circumstances, were *young* trees, showing many superb specimens; but even here were intermixed too large a proportion of small ones.

I think I have examined the subject suffi-

ciently to say, that this fault is characteristic of the variety.

Now, it is possible, that like the Yellow Bellflower, it may not succeed as well in the stiff loams of East-Bloomfield, as upon a lighter soil; or that like the Newtown Pippin, generous cultivation may in some measure remedy its deficiencies; but, unless this can be done, however valuable for the garden, or small orchard, it is worthless as a *market* fruit, when compared with the Baldwin, Newtown Pippin, or Roxbury Russet.

Macedon Nursery, 5 mo., 1846.

SWAINSTONE'S SEEDLING STRAWBERRY.

AMONG all the new varieties of strawberries that have come to us from England, within the last few years, none that we have seen are superior to Swainstone's Seedling.

A year ago we were in Boston, at one of those interesting and beautiful weekly exhibitions of fruits and flowers, made by the most zealous of all our horticultural societies, that of Massachusetts. Strawberries were then in perfection, and a great variety of sorts were contributed. In addition to all the leading kinds, both native and introduced, some new seedlings were shown for the first time. We had the honor of the very *piquant* and agreeable invitation to sit on the committee of *taste*, to decide which were really the best sorts in point of flavor. We do not at this time mean to say what celebrated kinds were tasted and passed over in silence, as far below the standard of *high* flavor; but some fine dishes of Swainstone's Seedling, from the President of the Society, seemed to pass round the committee's table so much more rapidly than those of any other sort, and to

be tasted again and again with so much more relish and *gusto*, that there was soon no doubt which sort had the popular vote; and the matured and grave sense of the meeting, if we remember correctly, was that nothing there seen or tasted, surpassed or even equalled Swainstone's Seedling in point of *high* flavor.

After this, we may say, that Swainstone's Seedling is now in full bearing with us this season. It is certainly a strawberry of the *very highest* flavor, of great beauty of appearance, and an excellent bearer. It is said in England to bear for a long time in succession; of this point we are not yet able fully to speak, though its crop is certainly maturing gradually, and not all at once as does that of many sorts.

The fruit of this strawberry, with us, is of average large size: from three to four inches in circumference are the ordinary dimensions. The foliage is very large and rich in appearance, and the foot-stalks of the leaves are long. The fruit is borne in large clusters on high and pretty strong foot-stalks. The berries are very regular in

Fig 16. *Swainstone's Seedling Strawberry.*

shape, varying from ovate to conical. The seeds are very slightly sunk; the surface of the fruit is rather even, glossy, and of a beautiful light scarlet, a good deal lighter in color than that of most pine strawberries. The flesh is solid, and very high flavored. The season of ripening is about midway between early and late, but it continues ripening for a good while.

Last winter is the first in which we fairly tested the *hardiness* of this variety. With us, it has so far proved perfectly hardy, much more so than some of the old Pine strawberries. But as it is yet comparatively new

in this country, it remains to be proved how far it will answer for general cultivation in all parts of the country.

In England, Swainstone's Seedling bears a very high character. It is placed among the few which rank as of the first quality, in all respects, in the garden of the Horticultural Society of London. Dr. Lindley recommends it as one of the six very best sorts for cultivation in that country. Our own experience, thus far, leads us to believe that it will prove, on the whole, one of the very finest of Pine strawberries for this climate.

REMARKS ON THE USE OF GUANO.

BY LONG ISLAND.

DEAR SIR—In common with many other persons, my attention was last season turned to this new manure. A substance for which it was claimed that it was cheaper

and more powerful than fifty times its weight in common manure—that it could be transported and applied with little or no cost—and which acted upon all kinds of

vegetable growth with wonderful power, could not but demand the immediate and serious attention of all farmers and gardeners.

I procured half a ton of the best Guano, in April, 1845. I applied it at the rate of 400 pounds per acre, to fields of corn and potatoes, and to a great variety of garden crops. The season, as all your readers will remember, was an unusually dry one. In the case of my potatoes, that portion of my field to which Guano had been applied, was decidedly injured by its application. The yield was one-third less than an adjoining equal portion of the same field, where common barn-yard manure had been applied at the rate of eight wagon loads to the acre, and even considerably less than another equal portion of the same field, where no manure whatever had been applied.

To my field of corn, I gave a top-dressing of Guano, when the blades were about two inches high. The benefit was not great, but the field was perceptibly greener, and a little more vigorous than an adjoining one treated in the common mode.

In my garden, I perceived but little benefit from the use of Guano. Peas, strawberries, and beans, treated pretty liberally with Guano, showed no improvement whatever. A large patch of onions, with which Guano had been drilled in, almost entirely failed; another patch in the same soil, manured slightly with compost, succeeding perfectly well. All plants newly transplanted, to which this stimulant had been applied in the soil around the roots, died—even when only a small quantity, previously mixed with soil, was used; and many young crops of vegetables, to which Guano was applied as a top-dressing at the rate of 300 pounds to the acre, were nearly burned up by it.

So far is but the experience of last season—a single year, and the most unfavorable of summers for growth.

This season, not discouraged by my bad success, I have tried Guano again. Its effects are almost entirely the reverse of those of last year.

I have applied Guano to the very same crops as last season. In almost every case, its effects have been all that I could desire. My small fields of potatoes and corn, treated with it at the same rate as in 1845, show, at the present moment, a very different appearance. In short, their appearance is all that I could desire. In several crops, the strength and growth of the crop treated with Guano, is almost double that of those treated in my ordinary way with manure.

In kitchen garden vegetables, the result is equally satisfactory; excepting in the case of cucumbers, I do not recall one vegetable that has not been greatly benefited by it—that is to say, in their growth and general aspect. My strawberries, in rows side by side, every other one of which was watered with liquid Guano, show the greatest improvement in those rows so watered.

But the effect is perhaps more clearly visible in grass lands. To them, I applied in March Guano mixed with double its bulk of plaster. The growth was so changed in color in one week, that it was noticeable almost as far as the eye could see the field. At the present moment, my men are mowing and making hay; and the yield, judging merely by the loads, is one-third heavier.

You will naturally ask why this great difference in the results of the two seasons? I answer, solely on account of the difference in the seasons themselves. Last year was so dry, that the Guano either had no effect, or else it was worse than useless; acting like caustic, and absolutely burning up the crops.

Besides this, I learned something from experience in the way of using Guano.

This year I have only used Guano either during a shower, or before a storm. So used, it always acts like magic. Once or twice, when I was so unlucky as to use it unseasonably—that is to say, no rain, but several hot dry days following, the effect was bad—the plants suffered, if much was applied; or the effect was not to be seen, if only a little was put on.

I offer these remarks in a very simple and candid manner, because I think it is only by a comparison of experiments that the public will get to know any thing about the value of Guano.

My own opinion is, that it is a very powerful manure; a rather dangerous manure in the hands of beginners, and those unacquainted with it. I do not think it is of any value here, unless applied pretty early, and when a moist season follows; then it is of the greatest value. It is not so good on dry soils as on moist ones, and it will never be worth so much to us as to the English. If we could afford always to apply it in a liquid form, it would be the best way; as it is, my advice is, use Guano, but only use it in rainy weather.

Respectfully yours, LONG ISLAND.

Culture of the Laurel—Interesting fact in Horticulture.

BY J. J. THOMAS, MACEDON.

It is well known that the Laurel, one of the most beautiful evergreen and flowering shrubs, will not flourish on most of the fertile soils of the country, and especially on what are termed *limestone* soils. An eminent horticulturist of Western New-York,* has lately tried experiments with its management, which have proved completely successful. His operations were founded on the position, that this plant, like many others, will not flourish in soils containing carbonate of lime,—and that where portions of soil have been for centuries subject to a free natural drainage below, the carbonate of lime has been gradually dissolved and carried away by the insensible portion of carbonic acid contained in the water thus passing downward through the surface soil.

Acting in accordance with this belief, soil was obtained from the banks of gulleys, where this filtering was supposed to have been most completely effected, and carted to the garden where beds were formed, and

the Laurel transplanted into this newly deposited soil. The result was entirely successful, though all attempts on the common and adjacent soil had failed. Whether the theory be correct or not, the practice may be of use in many other cases.

It may not always be necessary to resort to gully banks, as knolls and other elevated points of soil may possess similar properties. The character of such soils is often indicated by the nature of the vegetable growth it supports. In the beds of soil thus formed, the common *red sorrel* was found to grow perfectly rampant.* It may, perhaps, be familiar to many of our readers, that the red sorrel more frequently flourishes on knolls, hill sides, &c., where this drainage, already spoken of, most effectually takes place.

It may also be found, that such plants as the Laurel may be cultivated to advantage by the application to the soil of certain

* David Thomas, of Cayuga.

* This plant, the *Rumex acetosella*, must not be confounded with the wood sorrel, or *Oxalis acetosella*, which flourishes in rich calcareous soils.

vegetable substances, tending to produce a similar character as to the effect. An interesting experiment, mentioned by Edmund Ruffin, in his Essay on Calcareous Manures, may serve as an illustration :

“ One of the washed and barren declivities, (in lower Virginia,) which are so numerous on all our farms, I had, in February or March, packed full of green pine bushes, and then covered with the earth drawn from the equally barren intervening ridges, so as nearly to smooth the whole surface. The whole piece had borne nothing previously, except a few scattered tufts of poverty grass and dwarfish sorrel, all of which did not prevent the spot seeming quite bare at mid-summer, if viewed at a distance of one

hundred yards. The land was not cultivated nor again observed, until the second summer afterwards. At that time, the piece remained as bare as formerly, except along the filled gulleys, which, throughout the whole of their crooked courses, were covered by a thick and tall growth of sorrel, remarkably luxuriant for any situation, and which, being bounded exactly by the width of the narrow gulleys, had the appearance of some vegetable sown thickly in drills, and kept clean by tillage.” The species of pine is not named—there may be a great difference in the effect of different species—the acid taste of its leaf is mentioned.

Macedon, 6 mo., 1846.

ON THE CULTURE OF PEACH ORCHARDS.

BY J. W. THOMPSON, WILMINGTON, DEL.

[MR. THOMPSON, one of the most intelligent orchardists in the country, has kindly sent us the following letter. It has already been published in the Southern Planter ; but the whole subject of the peach culture is touched upon in so interesting and practical a manner, that we shall very gladly lay it also before our own readers.

We are gratified to perceive that Mr. Thompson agrees with us in our opinion that a rich and rather strong soil,—that is, “ a rich sandy loam with clay,” is the best for this fruit tree. Our readers may not all be aware that ours is, at the present moment, *the largest peach growing country in the world*. One must remember that even in “ sunny France,” the peach is chiefly grown on walls or trellises, to understand how superior is our climate for the orchard growth of this delicious fruit. We ought

to add, however, that many of our great market growers raise peaches of comparatively inferior flavor—chiefly because such are usually enormously productive sorts. So soon as the taste of consumers reaches that point that they are willing to pay extra prices for *high flavored* sorts, so soon we shall have these high flavored sorts brought to market in abundance. Last season we observed that a few hundred baskets of this kind were readily sold in the markets of New-York, at prices one-third higher than the ordinary ones. The moment this appreciation of *quality* becomes more general, the common Melocotons will give way to such fruits as George the Fourth, large Red Rareripe, &c. There is as great a difference between the two classes, as there is between a sour orange, and a genuine luscious Havana.—Ed.]

Mr. Editor—As the season of the year is at hand for transplanting peach trees and setting out orchards for the production of this luscious fruit, whether for family use or the supply of city markets, it occurs to me to redeem the promise I made you and several of my Richmond friends last spring, and now to give you some account of the introduction and cultivation of the peach tree in Delaware. I do this the more readily, as I may impart to you some useful information, and through your widely circulated journal answer many queries put to me (and which I have not had leisure to reply to,) by several gentlemen in the more southern and south-western states.

Before I do this, permit me to call your attention to a publication in the last January number of the "Planter," with a view to its correction of a notice on the "profits of raising fruit" in Delaware. "The product of one large peach orchard in the little state of Delaware, was sold last year to a company in New-York city, for fifty thousand dollars, and it is said the company realized sixteen thousand dollars profit by the operation. From the same orchard fruit has been sold to the amount of one hundred thousand dollars." All of which, for the sake of truth, and on behalf of our extensive peach growers, I must protest against, and pronounce a *mistake*—an over-wrought picture, much too highly colored, and calculated to mislead and disappoint the public mind. In contradiction of the statement alluded to, I am supported by Mr. Isaac Reeves and Mr. Philip Reybold, Jr., two of our largest and most successful cultivators of fruit; and will only add whilst on this subject, that the owners of our large orchards *never lease* them out, but market their own crops by steamer or schooner boats, generally chartered by the season or month; and that from the profits of sale, all the expenses of cultivation, picking, transportation and the interest on the land, must be deducted, to a large amount, which will lessen very materially the net proceeds of the most extensive orchards. Though in the early stages of the business the profits were great, yet in the rapid increase of orchards and production of fruit, they have much diminished, but are still handsome to those most extensively engaged at present.

To Mr. Isaac Reeves, a native of New-Jersey, is the whole credit due of first introducing, on a large scale, the culture of the inoculated peach tree into Delaware. The late Mr. Jacob Ridgway, of Philadelphia, owning a farm near Delaware City, on the Chesapeake and Delaware canal, was induced by Mr. Reeves to become his partner; and upon this property, in the spring of 1832, they set out the first twenty acres of inoculated peach trees ever planted in this state, with the view of supplying the Philadelphia market. They rapidly extended their plantation to about one hundred and twenty acres—were eminently successful, and one year—the *very best* season they ever had—their gross income from the sales of fruit was about sixteen thousand dollars. Peaches then commanded from one dollar twenty-five cents to three dollars per basket, containing about three pecks each. In the spring of 1836, the late Mr. Manuel Eyre

and myself followed suit upon our "Union Farm," midway between Wilmington and Newcastle, on the Delaware river, to about the extent of one hundred and forty acres. In a year or two afterwards, Mr. Philip Reybold and Sons went into the business—then a host of others, until now, from twenty-five hundred to three thousand acres of land, in Newcastle county, are planted with, and successfully cultivated in peaches—making Delaware, though the smallest of the states, the largest producer of this fruit. The result has been a proportionate diminution of price, the average per basket, one season with another, not exceeding from thirty to sixty cents. In this way, Delaware has become the principal supplier of the Baltimore, Philadelphia, New-York, and North River town markets, and many of our fine peaches now reach Boston. The whole annual income from this branch of business to the farmers of this county, may be estimated at from one to two hundred thousand dollars. For so handsome an additional product, the agriculturists of Delaware, as well as the consumers of peaches in our vicinity, owe a debt of gratitude to the *originator* of the culture, to whom, as one, I should gladly unite in presenting some valued and lasting memento in recognition of his merit for giving a *new staple to a state*; for who is a greater benefactor to mankind and the age he lives in, than he who brings into operation a new branch of business, gives, by his enterprise and perseverance, an impetus to agriculture, causes the earth to give forth its increase, and so multiplies its fruits as to bring them within the reach and enjoyment of all?

The great improvement made in peaches within the last few years in New-Jersey and Delaware, consists in propagating none but the finest kinds, by *budding and grafting*, so as to have the fruit *as early and as late* as our latitude will admit of; the earliest ripening with us from the first week in August, such as Troth's Early, Early York, and Early Ann, and ending in the latter part of October, with Ward's Late Free, the Heath, Algiers' Winter, &c. I need not take up your time now with enumerating all the different varieties used and planted out to keep up this succession—some of the principal ones are (in the order of enumeration) Troth's Early, Early York, Early Ann, Yellow Rareripec, Red Rareripec, Malacatoon, Morris' White, Old Mixon, Rodman, Ward's Late Free, Malden, Free Smock, Late Rareripec, Heath, Algiers' Winter, &c. These trees are generally obtained for about six dollars per hundred, from approved nurserymen in Delaware and New-Jersey, and the rearing them constitutes a distinct business of itself. They are produced by planting out the peach stones, or pits, in the spring, which have been slightly covered with earth in the fall, so as to be exposed to the action of the winter's frost. The sooner the pits are put in the sand or earth, after the fruit is matured, the better; they should never become dry. The shoots from these stones are budded in August of the same year, from four to six inches from the ground. The ensuing spring all the first year's growth is cut off above where the scion has taken—not, however, until it is well developed—

when, in the fall and following spring, they are ready for transplanting or sale.

The mode of preparing the ground for them is precisely that with us of the Indian corn crop; the earth is well plowed, and from thirty to forty bushels of lime is spread upon it to the acre. The trees of like kinds (for the convenience of picking) are then set out in rows at distances varying from twenty to thirty feet apart, according to the strength of the soil; a crop of corn is then put in and cultivated in the usual way, and this is done successively for *three years*; by this time the trees begin to bear. The cultivation of the corn being the proper tillage for the trees, and this crop amply paying for all investment in trees, &c.

After the trees commence bearing, no other crop of any kind should ever be grown amongst them, as I have known two rows of potatoes between a row of peach trees not only to affect the fruit, but seriously injure the trees; but they should be regularly plowed some three or four times in the season, just as if the corn crop was continued. So obnoxious in our country, is the peach tree to the worm or borer—the *Egeria exitiosa*—that each tree in the orchard should be examined twice a year, summer and fall—say in June and October—by removing the earth down to the roots, and killing, with a pruning knife, every intruder—then scraping the injured bark and removing the gum. Thus exposed, they should be left for a few days, when the earth should again be replaced with a hoe. The limbs should be only moderately pruned, or thinned out, so as to admit the sun and air, avoiding in the operation leaving *forks*, which incline them to split when burdened with fruit. When the peaches ripen, they should be carefully picked from step ladders, seven to eight feet high, into small hand baskets, holding one peck each. Our operators for this purpose are both men and women, who earn from fifty to seventy-five cents a day, besides being found. These baskets are gently emptied into the regular market baskets, which are all marked with the owner's name, and strewed along the whole line of orchard to be picked. As these are filled they are put into spring wagons, holding from thirty to sixty baskets, and taken to the wharf, or landing, where there is a house, shed, or awning, for the purpose of *assorting them*, each kind by itself, which is into prime and cullings—the prime being distinguished not only by their size and selection, but also by a handful of peach leaves scattered through the top. They are then put aboard the boats in tiers, separated by boards between, to keep them from injury, and so reach their destined market. We consider a water communication from the orchards, or as near as may be, most essential, as all land carriage more or less bruises or destroys the fruit. Our roads through the orchards and to the landings are all kept plowed and harrowed down smooth and even. The baskets for marketing the peaches are generally obtained in New-Jersey, at from twenty-five to thirty-seven dollars and fifty cents per hundred.

With trifling modifications our culture and practice may be made to suit not only the southern but the south-western states. I may here, perhaps,

properly remark that the average life of our trees is from nine to twelve years, when properly cared for and protected, as I have described—that the two great and devastating enemies, the trees have to contend against, are the "*peach worm*" and the "*yellow*;" the first readily yielding to the *knife* and the treatment of semi-annual examination; the latter being a *constitutional, consumptive, or malarious disease*, for which no other remedy is as yet known or to be practised, but *extirpation and destruction*. There are many theories and some practice recorded on this, by far the most destructive enemy of the peach tree. I may hereafter give my own views on this particular and obscure disease. I concur, however, with Mr. Downing, of Newburgh, that the great and prevailing disposition of the peach tree in our climate, is to over-production of fruit in favorable seasons. Our remedy for this is to carefully thin it off by plucking all those that touch, or are within two or three inches of each other, when the size of hickory nuts, which are thrown into some running stream, or into the hog-pens to be devoured. His mode of "*heading in*," or pruning one-half of the producing buds is new to me, but which I have just tried upon my garden trees in the city, and will be able to speak of *experimentally* hereafter.

With us in Delaware, as every where else, the peach tree *succeeds best in a good soil*. That preferred is a rich sandy loam, with clay. Many of my finest trees and choicest fruits are grown in a loose and stony soil. The trees should never be set out in wet, low, or springy situations, and for the same reasons, high and rolling ground should be selected for your plantations, and for the additional circumstance that they are less obnoxious to early frosts. I have no doubt of their full success upon such grounds as I visited upon the "*Falls plantation*" of Mr. Marx, near your city, the estates and high grounds of Mr. Richard Sampson, and such as I saw at Piconokee, Tuckahoe, and upon other similar sites on the James and Chickahominy rivers.

I may further remark, for the benefit of those desirous to pay some attention to the cultivation of peaches, (and *who should not be?*) that considerable additions of new and valuable varieties, *native* as well as *foreign*, are annually being made to those already known among us—many of them very fine. I have now several hundred raised from pits, imported for me by N. Frazier, Esq., of Philadelphia, Consul at Buenos Ayres, and long a resident merchant in that city, many of which will bear this year and next. To Mr. Sayres, of Sparta, Georgia, I am also indebted for a full sample of the native Georgia varieties, as well as to some other gentlemen in different states—all of which I mean to test and bring into notice, if of sufficient value. Whilst in the vicinity of Richmond, Norfolk, Fredericksburgh, Petersburg, Winchester, and other large towns of Virginia, the peach tree may be cultivated with profit for the market, and all over the state, for the purpose of drying, every farmer and owner of a lot may raise them in abundance for his own use.

Yours, &c., JAMES W. THOMPSON.

Wilmington, March 26, 1846

Is the Naturalization of Plants impossible ?

BY M. NEUMANN, PARIS.

[THE following is a translation of an article in the *Annales d'Horticulture*, Paris, which was lately read before the *Société Royale d'Agriculture* of France. M. Neumann is one of the most intelligent French horticulturists; and his opinions are entitled to grave consideration. We think, however, there are some facts well known in this country, and to which we shall hereafter refer, that will tend to prove that the kind of naturalization brought about by sowing the seeds of successive generations, is practicable to a certain extent. But undoubtedly *hybridization* is the shortest and most certain road to this result.—ED.]

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It has often been said, in the meetings of the Royal Agricultural Society, that the naturalization of plants is an easy and a natural process. Its advocates have even frequently cited as illustrations, plants originally from warm latitudes which they say are now naturalized here. I have heretofore dissented from this opinion, and I wish, at the present moment, by the aid of additional fact and experience, to demonstrate the impossibility of the naturalization of plants. In short, I wish to undeceive those, who, resting on this baseless theory, as hitherto held, still indulge the hope of enriching our soil with exotics that nature has only bestowed on favored climates, whose mean temperature is much higher than our own.

I am not however alone in this belief with regard to naturalization. In 1830, M. Poiteau, my friend and colleague, explained its impossibility to the class of pupils at the Horticultural Institute of Fromont. Later, in 1837 and 1842, he read before the Royal Horticultural Society two striking essays, showing the fallacy of this theory. I have now, therefore, the greater satisfaction in this coincidence of opinion, as I am about to bring the subject before you, and offer some new arguments against the theory of naturalization.

I ought to state in the outset, that the words *naturalization* and *acclimation*, as applied to plants, are nearly synonymous in my mind. In combating one, I wish to be understood as equally opposing the other. The venerable and honorable André Thouin, whose memory we must always greatly respect, was not perhaps the first who believed that vegetables gradually become naturalized. But he was the first who attempted to establish the doctrine, now more than half a century ago, trusting as he did, that it would benefit his

countrymen; for his leading motive in life was the promotion of the good of his fellow creatures. But unhappily nature's laws do not always accord with our theories; and since Thouin laid down the rules for the naturalization of plants, that is to enable them or their descendants to withstand a temperature much colder than that of the climate where they originated, we have not had the satisfaction of seeing any of these plants become really hardy, so as to bear the rigors of our climate.

Thouin's rule for naturalizing a plant, so as to render it or its seedling hardy, was briefly as follows:

"A plant from a tropical country must be grown in the hot-house until it produces seeds. These seeds must be sown, and the plants raised from them cultivated until they in turn produce seeds. The same process is repeated with the seeds of this generation, and by continuing this, (always sowing the first and freshest seeds) from three to ten generations, we obtain, at last, naturalized plants—in other words, hardy plants, capable of bearing our winters."

I cannot but appeal to the members of this society for the proofs of this kind of naturalization? Seeds were often sown in the very mode pointed out by Thouin before his time; we are now raising seedlings in the same way every day. And yet we have never obtained a plant more able to resist the winters, out of doors, than the original parent specimen.

Thouin has told us that in this way the large Nightshade, (*Belle de Nuit*;) is naturalized in France. But really this plant is by no means naturalized. In India, its native country, it is a perennial, and although it has now been cultivated from seed here almost 300 years, its roots still freeze and perish every winter in our climate in the open border.

The author adds that in the same way the *Cyclamen d'Asie*, the *Sainfoin manne des Israélites*, the *Luzerne de Médie*, and many other foreign plants, have been naturalized in this country; but he does not tell us at what altitude these plants grow where they are natives. He does not, therefore, afford us any proof that they do not really exist in their native habitats in an atmosphere greatly like our own. In short, of the four examples of naturalization, cited by M. Thouin, one of them stands without evidence, and the other three are far from being well supported by proofs.

As to naturalizing plants from latitudes much warmer than Paris, by cultivating them first in the hot-house, afterwards in the green house, and finally in the open air, it is a theory with no better foundation. Such of these plants, so treated, that were not able naturally to stand our winters, have never yet been brought to do so; and those which appear somewhat hardy, were really as much so, had they been tested the first season they were introduced. Thus, although we have cultivated

for a long time, under glass, the Fuchsia, the Clerodendron, the Madagascar Periwinkle, the Heliotrope, and a hundred other plants, the moment we consign them entirely to the open air, they all perish. There is that magnificent tree the *Acacia Julibrissin*, which we used to admire at Paris, but which we now rarely see. Our climate is a few degrees too cold for it; and therefore, until it is possible for man to change the nature of vegetables, or until Paris shall change its present mean temperature, we may rest assured that the *Julibrissin* will never really thrive here.

On the other hand, if many plants refuse to thrive in the open air in our climate, there are still a great many, though natives of distant countries, which accommodate themselves very well to our skies and soil, and seem to do honor to the cause of naturalization. But do we really perceive that they have changed or modified their nature, or their organization? Certainly not. They flourish in our climate, because they find here nearly the same temperature that they found at home.

Some time ago I received a foreign seed, which produced a tree. This tree I kept two years in the hot-house, because I had but a single specimen, and I was fearful of losing it. But soon after, finding that the shelter did not suit its habits, I planted it in the open air. There it found a temperature similar to that of its native country. It soon developed itself with great luxuriance. The leaves became at least ten times larger than when in the hot house, which was probably too warm for it. Here it soon showed its flower and fruit, and was in fact the fine tree from Japan to which botanists have since given the name of *Paulownia imperialis*. I am far from wishing to boast of having *naturalized* or acclimated it, since we cannot say that its nature has changed, or that it would not have stood at first with the greatest facility in our climate. But we can say that it finds at Paris almost the same temperature as in Japan, and that it thrives very well here.

It is a common remark, when talking of this subject, that the *Potato* is an acclimated plant. But the least frost always destroys it. Its seeds pro-

duce a great variety of sorts, of greater or less size, differently colored, and of better or worse quality; but *never any less susceptible to frost*. There are also many leguminous plants that we consider acclimated or naturalized here. But these same plants, whether multiplied by seeds or roots, always fall a prey to the same degree of frost by which they would have been destroyed the first year of their introduction.

If the naturalization of plants were possible, how is it to be accounted for, that, notwithstanding the Olive and the Orange have been cultivated for centuries in the *Département du Var*, they have never advanced in the least towards the interior of France?

Industry, the necessities of man, and the zeal of the cultivator, have indeed made great efforts to break down these natural limits drawn by nature; and the want of success, apparent to all, is well calculated to impress us with a belief that the naturalization of plants is an utopian scheme.

There is however one mode upon which the advocates of naturalization have not touched, by which to produce plants more hardy than their parents. This means is *HYBRIDIZATION*. If, for example, we fertilize the pistil of a tropical plant with the pollen of a plant nearly related, but a native of a cold region, the seed which will be afforded will yield a plant which will most probably be less sensible to cold than the mother plant. I have already made some experiments which appear to confirm this opinion. Thus among some seedling *Rhododendrons*, the product of a cross between the Chinese *Rhododendron* and those of North America, there are some which stand the winter perfectly, and others which fail to do so. One can even recognize by certain characters of the leaf, etc., those seedlings, among the number, which possess hardy properties, and those which do not.

The hybridization of plants, not having as yet been studied in this point of view, I propose to continue my experiments, and hope to have the honor of laying the results before the Royal Society of Agriculture.

NEUMANN

REVIEWS.

THE VEGETABLE KINGDOM: or the Structure, Classification; and Uses of Plants; illustrated upon the natural system, by JOHN LINDLEY, Ph. D., F.R.S. & L.S., Professor of Botany in the University of London, &c., with upwards of 500 illustrations. London, Bradbury & Evans. New-York, Wiley & Putnam. Price \$8.00.

WE look upon this new volume of Dr. Lindley's, as, in a popular sense, the greatest botanical work of the age. The artificial system of Linnæus, useful as it was in

its day, is now laid aside by almost all modern botanists. It bears the same relation to the natural system, that a mere word-dictionary does to a profound work on the philosophy of language. So long as almost the whole vegetable world was yet to be classified and named, the system of Linnæus, which aimed at little more than fixing the generic and specific character of a plant, and thus enabling the student of nature to

recognise it by its appearance when in blossom, appeared sufficient. Plants of the most opposite natural traits, were assembled in the same classes and orders. It was only necessary that they should bear a resemblance in those important characteristics, the *stamens and pistils*.

It is not now necessary for us to inform our readers here, in what consists the superiority of the *natural* system. A system which assembles together plants by their natural affinities—their similarity in structure—their habit of growth—their resemblance in properties, uses, and qualities—which, in short, is based on the closest and the most numerous natural relations—cannot but be more philosophical, as well as more deeply instructive, than one depending upon a few arbitrary and insignificant characters. If we hold in our hands for the first time, a plant which we have ascertained to belong to the *fifth class* of Linnæus, we learn its name, and the fact that it has five stamens. Of its affinities and properties, its relative structure, and its place in the vegetable kingdom, we gather no additional information. Let us suppose, on the other hand, that we have before us a pea or a bean plant; this plant belongs to a very large *natural order*, containing not less than 6,000 species, distributed in all parts of the world; yet there are certain strong natural features which so distinctly mark the order, that having once become familiar with one member of it, we have a pretty distinct notion of the whole group. They all have either a *papilionaceous* (pea-blossom-shaped) flower, or a leguminous fruit; the latter consisting of a solitary pod, (carpel,) the style of which proceeds from the apex of the pod. While one large and well marked division of this order (*Papilionaceæ*) embraces all the *pulse* plants distinguished for nutritious or wholesome qualities, another,

(*Cesalpinicæ*), is noted for its purgative properties; and a third, (*Mimosæ*) contains numerous plants characterized by the astringency of their bark, and the quantity of gum which they secrete.

Jussieu and De Candolle had thoroughly taught and established the natural system on the Continent, before the English public were willing, generally, to receive it. To Dr. Lindley, indeed, belongs the credit of demonstrating the great superiority of this arrangement to English students. His *Introduction to the Natural System*, was first published in 1830; since that time, he has been diligently engaged in perfecting his views of the natural method down to the present date.

The result of all his researches and investigations, joined indeed to those of all the leading botanists of the day, is contained in this great work—the *Vegetable Kingdom*. It is a thick octavo volume of 900 pages, which, for perspicuity, conciseness, clear scientific acumen, and profound views, is not surpassed by any similar work ever published. Lindley's mind, as compared with that of many of the continental botanists, is remarkable for that strong and clear *common sense* view, as opposed to every thing fancifully speculative or theoretical—a trait which seems to us peculiarly English.

In illustration of this, we quote the following remarks on the natural affinities of plants, from the Introduction:

The reason why the vulgar commit mistakes in judging of natural affinity is, because they draw their conclusions from unimportant circumstances, the chief of which are size, form, and color. The similitude of size gave rise to the old notion that all trees made a class by themselves; which is as if, in a classification of animals, the horse, the lion, and elephant, were placed in a different part of the animal kingdom from the rat, the cat, and the goat. Form is another of the false guides which lead to error; if all round-leaved or square stemmed plants are to be associated, so ought glass to be classed with the diamond when it is cut to the same shape. Color is less a source of mistake, and yet it is some-

times unconsciously employed by the superficial observer, as when he calls all yellow-flowered Composites Marigolds, and all white-flowered vernal bushes Thorns. It must be evident to the most careless thinker that such resemblances are trifling. That which really determines affinity is correspondence in structure. It may be said that those plants are most nearly related which correspond in the greatest number of points, and those the most distantly in which we find the fewest points of correspondence; and this must be true when we remember that if every point in the structure of any two plants is found to be alike, then those two must be identical. But it will be obvious that an examination of all plants through every detail of their organization is impracticable; it has never in fact been accomplished in any one case. Experience must have shown that the organs of vegetation are of very different degrees of value in determining resemblance in structure; that some are of paramount importance, others of less consequence, and others of comparative insignificance. Hence the relative value of characters forms a most important part of the study of the Botanist; it is in fact the pivot upon which all the operations of a systematist must turn.

The only intelligible principle by which to estimate their respective value is according to their known physiological importance; regarding those organs of the highest rank which are most essential to the life of the plant itself; placing next in order those with which the plant cannot dispense if its race is to be preserved; assigning a still lower station to such organs as may be absent, without considerable disturbance of the ordinary functions of life; and fixing at the bottom of the scale those parts, or modifications of parts, which may be regarded as accessory, or quite unconnected with obviously important functions.

The first office which all organized beings have to perform is that of feeding; for it is thus only that their existence is maintained. The second is that of propagating, by means of which their species is perpetuated. These being functions of the highest importance, it is reasonable to conclude that the organs provided for their proper execution must be of the highest importance also, and hence that they are beyond all others valuable for the purposes of classification. And again because the power of feeding must come before that of propagating, it might be conjectured beforehand that the organs destined for the former operation would afford the first elements of a Natural method. But since the action of feeding is very simple in the Vegetable Kingdom, because of the similar modes of life observable among plants, while, on the contrary, the act of propagation is highly diversified, on account of the very varied nature or structure of the parts by which it is accomplished; so might we conjecture that the organs of nutrition would afford but few distinctions available for purposes of classification, while those of fructification would furnish many. And such is the fact. Hence it is that the great classes of plants are principally distinguished by their organs of growth, and that in the numerous minor groups such peculiarities are comparatively disregarded, their chief distinctions

being derived from their parts of reproduction. These principles are more fully expressed in the following axioms:—

1. Peculiarities of structure which are connected with the manner in which a plant is developed, are *physiological*; those which are connected with the manner in which parts are arranged, are *structural*. Physiological characters are of two kinds, viz., those which are connected with the *mode of growth* (the organs of vegetation), and those which regulate *reproduction* (the organs of fructification).—Physiological characters are of greater importance in regulating the natural classification of plants than structural.

2. All modifications of either are respectively important, in proportion to their connection with the phenomena of life.

3. If we allow ourselves to be steadily guided by these considerations, we shall find that the internal or anatomical structure of the axis, and of the foliage, is of more importance than any other character; because these are the circumstances which essentially regulate the functions of growth, and the very existence of an individual.

4. That next in order is the internal structure of the seed, by which the species must be multiplied. Thus the presence of an embryo, or its absence, the first indicating a true seed, the latter a spore, are most essential circumstances to consider. And so also the existence of albumen in abundance round the embryo, or its absence, must be regarded as a physiological character of the highest value: because, in the former case, the embryo demands a special external provision for its early nutriment, as in oviparous animals; while, in the latter case, the embryo is capable of developing by means of the powers resident in itself, and unassisted, as in viviparous animals.

5. Next to this must be taken the structure of the organs of fructification, by whose united action the seed is engendered; for without some certain, uniform, and invariable action on their part, the race of a plant must become extinct. Thus we find that the structure of the anthers, placenta, and ovules, are more uniform than that of the parts surrounding them, while their numbers are variable; and the condition of the filament, which appears of so little importance in a physiological point of view, is also inconstant. So also the texture, surface and form of the pericarp, which act as a mere covering to the seeds, is not to be regarded in these inquiries, and, in fact, differs from genus to genus; as, for instance, between *Pyrus* and *Stranvæsia*, or *Rubus* and *Spiræa*, in the truly natural Rosaceous Order.

6. On the other hand, the floral envelopes seem to be unconnected with functions of a high order, and to be designed rather for the decoration of plants, or for the purpose of giving variety to the aspect of the vegetable world; and, consequently, their number, form, and condition, presence or absence, regularity or irregularity, are of low and doubtful value, except for specific distinction. There seems, indeed, reason to expect that every Natural Order will, sooner or later, be found to contain within itself all the variations above alluded to. Even in the cases of regularity and irregularity we already know this to be so; witness *Veronica*

and Scopolia in Figworts, and Hyoscyamus in Nightshades, Delphinium in Crowfoots, and Pelargonium in Cranesbills.

7. The consideration of the parts of fructification is a circumstance but little attended to in a general point of view, except in respect to the corolla; but as it seems to indicate either the greatest change that the parts can undergo, or where it occurs between important and usually unimportant organs, that in such cases the latter become essential to the former, it probably deserves to be regarded with great attention. For instance, the presence or absence of the corolla is often a point of little moment, and is, we know, a very fluctuating circumstance. This is especially true of those Natural Orders in which the stamens and petals are separated; as in Roseworts, Rhamnads, Onagrads, &c. On the other hand, when the stamens, which are indispensable organs, adhere to the petals, the latter are more constantly present, as in Figworts, Acanthads, Nightshades, &c.

The great superiority of this work on the Vegetable Kingdom, consists not merely in the great improvements made in the definitions of the natural groups, the orders and the alliances of plants. To the botanical reader, the admirable illustrations, liberally introduced upon almost every page of the work, are of the highest value. These consist generally of an example—usually one of the most characteristic—of each natural order; being an engraving, showing the most essential parts of the plant entire, accompanied also by such portions of the fructification, the fruit, and the seed, most clearly and beautifully delineated, as enable one to catch, almost at a glance, a correct notion of the structure and peculiarities of each natural group.

The Vegetable Kingdom is not a work so dry, technical, and scientific, as to be confined to the desk of the botanical student. It presents a broad and comprehensive view of the whole vegetable creation, embracing at the present time more than 82,000 species of known plants. Indeed the volume is replete with all the most interesting and remarkable points in the known history of vegetation.

Every one has noticed the little olive colored threads of vegetable substance which

are attached to bits of rocks, or even float upon the surface of still pools of fresh water. These are *Confervas*, apparently one of the lowest and least interesting of all forms of vegetable life. Yet the following remarks prove how curious is their physiological history :

If doubts exist as to the vegetable nature of the last order, or of some parts of it, no question arises as to what that of *Confervas* is. Its genera are now admitted on all hands to be plants, since M. Decaisne's important discovery of the vegetable nature of several things which had been previously regarded as Zoophytes. Nevertheless, it is curious to see how much, at one period at least of their existence, they have of an animal nature, if the power of moving from place to place is to be taken as an indication of such quality. It seems incontestable, notwithstanding the denial of Mohl and others, that many of the *Conferva* tribe, especially of the genera *Conferva*, *Ulvæ*, and their near allies, produce in their tubular threads reproductive bodies, or spores, which, after a time acquire a power of rapid and quasi-voluntary motion while in the inside of their mother; that by degrees, and in consequence of their constantly tapping against the soft side of the cell that holds them, they escape into the water; that when there they swim about actively, just like animalcules; and at last retreating to a shady place, attach themselves to a stone or some other body, lose their locomotive quality, and thenceforward germinate and grow like plants.

From the remarks on the properties of the *Fungales*, we extract a singular account of the Toad-stool or Fungi, which the Kamchatkans indulge in as a substitute for *strong drink*.

This variety of *Amanita muscaria* is used by the inhabitants of the northeastern parts of Asia in the same manner as wine, brandy, arrack, opium, &c., is by other nations. Such Fungi are found most plentifully about Wischna, Kamchatka, and Wilkova Derecona, and are very abundant in some seasons, and scarce in others. They are collected in the hottest months, and hung up by a string in the air to dry; some dry of themselves on the ground, and are said to be far more narcotic than those artificially preserved. Small deep colored specimens, thickly covered with warts, are also said to be more powerful than those of a larger size and paler color. The usual mode of taking the Fungus is, to roll it up like a bolus, and swallow it without chewing, which, the Kamchatkades say, would disorder the stomach. It is sometimes eaten fresh in soups and sauces, and then loses much of its intoxicating property; when steeped in the juice of the berries of *Vaccinium uliginosum*, its effects are those of strong wine. One large, or two small Fungi, are a common dose to produce a plea-

sant intoxication for a whole day, particularly if water be drank after it, which augments the narcotic principle. The desired effect comes on from one to two hours after taking the Fungus. Giddiness and drunkenness result in the same manner as from wine or spirits; cheerful emotions of the mind are first produced; the countenance becomes flushed; involuntary words and actions follow, and sometimes at last an entire loss of consciousness. It renders some remarkably active, and proves highly stimulant to muscular exertion: by too large a dose, violent spasmodic effects are produced. So very exciting to the nervous system in many individuals is this Fungus, that the effects are often very ludicrous. If a person under its influence wishes to step over a straw or small stick, he takes a stride or a jump sufficient to clear the trunk of a tree; a talkative person cannot keep silence or secrets; and one fond of music is perpetually singing."

We are accustomed to consider some of the forest trees of this country—the sycamores of the Ohio, or the giant pines of the Columbia river, as at least respectable specimens of size and longevity. But they seem saplings of yesterday, when compared with some of the enormous leguminous trees of the forest of Brazil. Were it not that Dr. Martius on whose authority the statement is made, is one of the more careful and most accurate scientific travellers, one could hardly credit the pictures given of the South American forests.

"The locust trees of the West Indies have long been celebrated for their gigantic stature, and other species of *Cæsalpinia* are the Colossi of South American forests. Martius represents a scene in Brazil where some trees of this kind occurred of such enormous dimensions, that *fifteen Indians with outstretched arms, could only just embrace one of them*. At the bottom they were 84 feet in circumference, and 60 feet where the trunks became cylindrical. By counting the concentric rings of such parts as were accessible, he arrived at the conclusion that they were of the age of Homer, and 332 years old in the age of Pythagoras; one estimate, indeed, reduced their antiquity to 2052, while another carried it up to 4104; from which he argues that the trees cannot but date far beyond the time of our Saviour."—p. 551.

This volume is full of matter, such as will engage the profound attention of the botanist; but we have also made these few extracts to show the general reader that Botany is no longer the dry and dusty study of pistils and stamens that it once was. The

Natural System forces the student of nature to take a wide and expanded view, not only of the structure, but of the relations, habits, properties, and indeed the whole history of the world, of the "flower and the leaf." The author of the Vegetable Kingdom has shown his usual ability in arranging his grand outline view of the splendors of this beautiful drapery of the earth's surface; and many more persons than the small class who are interested in the *systems*, will find pleasure and instruction in its pages.

There are numerous important botanical points of novelty and interest in this work. Dr. Lindley confesses frankly and boldly that he has, at the apparent cost of the charge of inconsistency, considerably changed, modified and improved upon his previous published views of the arrangement of the Natural Orders, in this his last work. We are glad to perceive it. No science has received a greater impulse, or made greater strides of progress, within the last ten years, than Botany. There is abundant proof, too, of a disposition on the part of Dr. Lindley, to purge science of all unnecessary technicalities—to render it appreciable to the common sense mind of the age, rather than to lock it up to the ultra-scientific few, which we hail with satisfaction in so prominent and so valuable a work as the Vegetable Kingdom.

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"NEW BOTANICAL WORK IN PREPARATION. By Prof. Gray of Cambridge, entitled THE GENERA OF THE UNITED STATES FLORA, ILLUSTRATED. This work is on the same plan as the *Genera Plantarum Floræ Germanicæ iconibus et descriptionibus illustrata*, by Nus von Esenbeck, a large octavo plate and two pages of letter press being devoted to each genus: but the detailed descriptions will be in English instead of Latin. The drawings, with full and complete analyses of the parts of the flower, fruit, and seed, made under the microscope, are executed by Mr. Sprague, an artist of extraordinary skill in such subjects, under Prof. Gray's direction, in every instance directly from nature. The drawings will be engraved on stone, in the style so successfully practised at Munich, by Mr. Prestle, an artist from that city. The work will be published

in whole volumes, as near as may be of 100 plates, and about 220 pages of text in each, taking care not to divide natural families, and following the general arrangement of Torrey & Gray's *Flora of North America*, or Gray's *Botanical Text Book*; and will comprise 8 or 10 such volumes. The first volume will be ready the ensuing autumn, and the others will succeed at the rate of two volumes a year until the whole is finished. The price to subscribers is fixed at SIX DOLLARS per volume of 100 plates (or at that rate when the number of plates, as may sometimes happen, considerably exceeds 100.)

Subscribers who pay for the volume in advance, will have the same delivered by mail, or otherwise, *free of expense*. All orders to be addressed to WILEY & PUTNAM, Broadway, New-York.

*. After the completion of the work, the price will be advanced."

[No person in America, we may safely say, is so well qualified for this undertaking, as the Professor in the botanical chair at Cambridge. We shall look with no little impatience for the appearance of this work. It will undoubtedly be one of the most interesting and acceptable scientific publications of the day.—Ed.]

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A Guide to the Orchard and Fruit Garden: or an account of the most valuable Fruits cultivated in Great Britain. By GEORGE LINDLEY. With additions of all the most valuable fruits cultivated in America, &c.; by MICHAEL FLOY. A new edition, with an Appendix, describing many American Fruits not mentioned in the former edition. New-York, J. C. Riker, 1846.

LINDLEY'S *Guide to the Orchard* is undoubtedly one of the very best English works on Pomology that have ever appeared. Its author, George Lindley, was a horticulturist of great practical knowledge, and had both unusual tact and large experience in Pomology. We have always been glad to bear testimony to the high value of his labors, and to the excellence of his "*Guide to the Orchard*."

This work was first published in 1831. We believe there was never but a single edition of it published in England. Mr. Floy did the American public, and the cultivators of fruit, great service, by republishing the work in this country in 1833, with

descriptions of such native fruits as were then considered of most importance.

It is now, however, *fifteen years* since Lindley's *Guide to the Orchard* was written. Since that time, the advance that has been made in Pomology, and especially in the test and comparison of fruit, is indeed very great. The Horticultural Society of London, alone, have done more for the progress of this subject in that time, *than was ever done in a century before*. In this country, Pomology has grown to be a matter of general study and interest, almost wholly since that time. We were therefore not a little surprised on receiving a copy of this new edition of Lindley, by Mr. Floy. We expected, at least, to find a complete revision of those sorts which have been, since the issue of that work, proved and acknowledged synonymous, incorrect, or the merits of which had been rated too high or too low.

We find, on the contrary, that the whole body of the work remains just as it was when issued in London, by Lindley, fifteen years ago, or by Mr. Floy, in New-York, thirteen years ago. The reader, therefore, must look upon the work as representing the best state of knowledge on this subject at that time, and not at the present moment. The description of all the then well established sorts is excellent. Had its author, (the father of the present Professor Lindley,) lived till the present moment, he could have rendered the work as perfect as any other person whatever. But he would have regretted to see the work again reprinted in the face of all the discoveries, proofs, and experiences of fifteen years in the gardening world, without taking advantage of them. In peaches and pears especially, he described many sorts as distinct, which, with the larger experience that has since been obtained, every pomologist knows to be synonymous with others. Whoever, there-

fore, looks to the Guide to the Orchard as a pomological work of high value, *as a volume of reference*, will find it such. Whoever expects to find it a manual expressing the state of pomological knowledge at this time, will be greatly disappointed.

Mr. Floy's additions to the edition now published, are embraced in an appendix of 11 pages. In this, he notices 9 apples, 11 pears, 7 plums, and 2 quinces, not described in his edition of 1833. We suppose, therefore, these are all the American fruits of the last thirteen years, that he considers worth a place now in a work on Pomology. Such varieties as the Northern Spy apple, Crawford's Melocoton peaches, the Ohio grape, the Boston nectarine, the Fastalf raspberry, Hovey's Seedling strawberry, and other sorts of the highest reputation, he has not thought it worth while to introduce in this volume.

There are some odd *notions* in the appendix, which will not escape the eye of the pomologist, such as the following:

"DIX PEAR.—We doubt whether this is not the old Brown Beurré.

LOUIS-BONNE DE JERSEY.—Probably the Louis-Bonne. It may, however, be a distinct seedling variety," &c.

Mr. Floy describes, under a separate head, (page 413,) what he calls the "New-York Virgalieu" Pear. As we understand his remarks, we infer that he wishes to establish the point that this sort is a seedling variety, raised by Williamson, a New-York nurseryman, more than forty years ago; and that it is identical with the sort generally known and described by us, and supposed to have been introduced by the late Parmentier of Brooklyn, as the *Surpasse Virgalieu*.

In all this, Mr. Floy may be correct. The history of the *Surpasse Virgalieu*, has already been involved in doubt; and it is by

no means improbable that it was really raised by Williamson. The droll part of the affair is, however, this: Mr. Floy quotes as synonyms to this sort, the following names, viz:

Virgalieu. *Nursery Cat.* 1807.
 Surpasse Virgoulouse. *Parmentier*.
 Columbian Virgoulouse. *Bloodgood*.
 Columbia. *Downing*.
 St. Michael, of Boston cultivators.

Does Mr. Floy really suppose that the cultivators of Boston, to whom the *Surpasse Virgalieu* is well known, would ever confound it with the old St. Michael's or Doyenné? or that we could not tell the difference between this medium sized autumn fruit, and the large and distinct winter pear, known as the *Columbia*? There is no more resemblance between the two, than between a Newtown Pippin and a Roxbury Russet!

There is, as Mr. Floy truly says, no resemblance between the White Doyenné and the "New-York Virgalieu," (that is, the *Surpasse Virgalieu*.) But the Virgalieu of the New-York markets, and of the State at large, is by no means the *Surpasse Virgalieu*. It is the old White Doyenné, the St. Michael's of Boston; and this is, we believe, universally acknowledged by every fruit grower in the country.

Mr. Floy is, we believe, a worthy man and an experienced gardener. The description of the few American fruits in his edition of this work, published in 1833, were really excellent; and on comparing those with the hasty and imperfect ones in the appendix to this volume, we have more than once been tempted to believe that the latter were never written by him; but that his name has been used or continued to give currency to these crude additions to the original volume.

FOREIGN NOTICES.

THE English horticulturists seem to be suffering this season with a great number of vegetable maladies, not common in that climate. Dr. LINDLEY, in the leading article of the last number of the *Gardener's Chronicle*, says,—“An alarm has arisen among some of our correspondents as to the state of various kinds of plants in which they think symptoms of *unusual disease* are appearing; and they are apprehensive lest such general affections in the vegetable world should be forerunners of like plagues in the animal.” Some of these correspondents have forwarded for examination shoots of the Lilac and common Laurel, “the young leaves and shoots of which were dying back, after becoming spotted, much in the manner of the potatoes, and here and there the lowest part of the shoots, next the old wood, was black and brittle, exactly as in the Potato haulm next the old tuber.” In other districts the trees of the Pine family are suffering greatly. “Mr. AYRES, of Brookland, says that at Blackheath the whole of the foliage is falling off the Spruces and Larches, and though a few new branches are breaking out, their numbers are so few that the trees must be removed. At Wrexham, hundreds of Larches, 4 to 12 years old, are dying off this season. The disease seems to prevail mostly among trees of the age above mentioned. In a plantation about 30 years old, not one seems to be affected. The leaders and most of the upper branches are quite bare of leaves; and the lower ones seem scorched, and only just alive. *These trees have hitherto grown very rapidly.*”

Last season, in England, was just the reverse of ours; being a very *rainy* one, and causing an exceedingly gross and luxuriant growth. To this cause Dr. LINDLEY is inclined to attribute the unusual signs of disease. He says, “We do not recognize in these symptoms anything incompatible with a watery condition of last year's wood; arising not so much from excess of water in the autumn, as from want of heat and light to carry it out of the system. Under these circumstances it may be easily conceived that the resinous secretions, necessary to the health of coniferous trees, were inadequately deposited, and that now, when growth recommences, the young leaves cannot find in their neighborhood their food, (or organizable matter), in such a state that they can assimilate it. The result of that must necessarily be that the foliage will drop off; and the probability is that, in such cases, the wood will die back or prove permanently diseased.” In the case of the Lilacs, &c., the disease is attributed to the insufficient manner in which the wood of most plants was ripened last autumn.

We have referred to this more particularly from its analogy to the same thing, which every year happens more or less in this country—especially in the Western States, where from the depth and richness of the soil, the wood is often left in an unripe state when winter sets in. The pear-tree, being the most susceptible of all fruit trees, is in many places, from this cause, almost always affected by

the *blight*—which is the result of a winter's cold on unripened wood.

THE POTATO DISEASE. There is every reason to suppose that the Potato “murrain” will be worse in England this season than last. Many persons in England have already tried experiments by growing sets, carefully selected and planted, in pits and hotbeds—and almost uniformly the roots have rotted as soon as they have ripened. And this too in some cases when the plants were so situated as not to be exposed to wet. In the south of Europe the disease is spreading rapidly, and the potatoes from Lisbon then (May 30th) on sale in the London markets were said to be one sixth diseased.

It is stated in the *Gardener's Chronicle* that the same disease, or one apparently identical with it, has broken out and “assumed a putrid virulent form” among the *Yams* in Jamaica. It is feared that it may destroy the food of the West India islands, as it has done that of Ireland, and thus the sufferings of the Colonies there may be as great as that of the poorer classes in the latter country.

DRYING PLANTS.—“In drying plants for a herbarium care must be taken not to press them so much as to crush them. Succulents and plants that drop their leaves, such as Heaths, should be dipped in hot water before they are pressed. Each specimen should be placed between a sheet of brown paper, and between each filled sheet several empty ones should be placed. For the first day or two the pressure should be only just sufficient to prevent the leaves and flowers from shrivelling. When the papers become damp the plants should be shifted to dry ones, increasing the pressure after every shift till the specimens are perfectly dry.”—*Gardener's Chronicle*.

TO DESTROY SLUGS.—“We strongly advise all who are attacked by slugs to try the effect of lime water,* which does not at all injure any crop, and immediately destroys the animal. To make the application efficient, it is, however, necessary to use it late in the evening and very early in the morning, say at day-break, when the slugs are feeding. A couple of applications of lime-water has completely exterminated legions of slugs under our own eyes.” *Lindley, lb.*

A correspondent of the *Chronicle* adds from his own experience: “The following mixture will kill slugs; gas water, 1 gallon; water, 6 gallons; lime, as much as it will take up. This beats plain lime water or gas water.”

THE NOISETTE ROSE.—The Noisette Rose is said by Mr. Rivers to have been raised from seed by M. Philip Noisette, of Charleston, America, and

* Lime-water is made by throwing a piece of quick lime of the size of one's fist into a pail of water. When it is dissolved, let it stand for some time to settle, when the clear water should be poured off and is ready for use.—[*ibid.*]

sent by him to his brother in Paris. Now this does not happen to be true. It was raised by a gentleman on Long Island; a plant was brought from there by Monsieur Landonne, an intimate acquaintance of the raiser, to Rouen, where it was cultivated in large quantities. Pailland, a gardener at Rouen, when Noisette of Paris received a plant from his brother in America, (who by the by, might object to inform us how he got it from Long Island), grew it under an iron cage in one of his houses for protection, while it was being commonly sold in Rouen at a moderate rate. Prevost, the well known cultivator at Rouen, can attest to these facts.—*Annals of Horticulture*. [If this be true, (which we doubt,) why not give the name of the "gentleman on Long Island" who originated it.—ED.]

LONDON HORTICULTURAL SOCIETY.—The last (May) exhibition of this Society is represented as "perhaps the best that has ever graced the gardens." The day was very propitious, and the gardens were thronged with four thousand eight hundred and forty-four visitors, including Prince Albert. "As for the flowers," says Dr. Lindley "their beauty was beyond description. Never before was there such a blaze of rich colours, delicate tints, and magnificent vegetation assembled. The great table on which the Chinese Azaleas and Cacti were assembled was a pyramid of flame, and the exhibition of Orchids alone was 43 yards long, in a double bank; nor was there a bad specimen among them."

THE YELLOW PÆONY.—(*Pæonia wiltmannia*.) "A more remarkable acquisition than a yellow Pæony, not a straw-coloured species, (which is only a spoiled white,) but a true yellow flowered plant does not often occur. All that we know for certain of its history is that it was received in October, 1842, in the garden of the Horticultural Society from M. N. de Hartwiss, the director of the Nikita garden in the Crimea; that it was just mentioned in the "London Journal of Botany" for April, 1842, by Dr. Fischer of St. Petersburg, who in a letter to Sir Wm. Hooker makes the following statement:—"Mr. Hartwiss has received many interesting plants from Abcharia, sent by Count M. Worontzoff. Among them he has found a yellow flowered Pæony. *Epimedium pinnatum*, and *Pinus nordmanniana*, the latter an Abies, said to be a beautiful tree."

We understand that 25 guineas was demanded for a single plant of it in one of the great continental nurseries. The species has much the appearance of *Pæonia cretica*, is quite hardy, and grows where any other Pæony will grow, and flowers in May. At present we believe that the plant in the garden of the Horticultural Society, is unique in this country.—*Botanical Register*.

PRE-ERVING POLLEN.—M. H. Haquin, a zealous and intelligent horticulturist at Liege, has succeeded perfectly in impregnating lilies with pollen kept for 48 days; the Azalea, with pollen kept 42 days; and, what is still more surprising, the Camellia has borne perfect seeds when the pistils were fertilized with pollen, gathered 65 days previously.

M. Haquin has now fine hybrid seedlings from these plants, to the flowering of which he is anxiously looking forward.

As soon as the blossoms open, M. Haquin cuts off the pollen, (anthers,) and treats it in the following manner: "I cut off the stamens as soon as I see them, put them in a paper packet closely pasted, and place the packet for 24 hours in a warm and dry place. At the end of this time, the pollen dust is perfected. I then take the pollen out of the paper packet, and put it in another, made of very thin sheet lead. Afterwards, I place this in another paper packet, label it, and put the whole away in a place that is cool but not moist."—*Revue Horticole*.

[M. Haquin adds that he has the pollen of the Azalea and Camellia, preserved in this manner, with which he intends to fertilize the blossoms of the ensuing year. The fact of being able to preserve pollen, is one highly interesting to all amateurs who desire to raise new varieties, whether of flowers or fruit, by crossing or hybridizing; since it often happens that the plant to be fertilized blooms too early or too late, for the blossoms of the male parent. Or perhaps the sort to be fertilized, may be in one place, and the one which we desire to fertilize with, may be in another an hundred miles off. It is easy to see, that since it is found that pollen may be preserved, this is of no moment. The pollen may be gathered when scarcely mature, and kept for days or weeks; and it may be sent by mail from one part of the country to another.—ED.]

EARTHING UP POTATOES.—On this subject, Mr. C. W. Johnson says:—"I have long had doubts relative to earthing up potatoes being a beneficial practice, and now I am convinced that it is detrimental. The variety employed in my experiments are the Pink Kidney; all the sets were planted at the same time, (the first week in April,) in rows two feet apart, and eighteen inches in the rows; and were taken up September 24th, and weighed. The average of all my experiments gives exactly an increase of one-fourth in favor of not earthing up; but some of the plants gave still more, viz: as 42 lbs. is to 31½ lbs. The experiment has been made on the sixteenth of an acre of good deep loam, with a cool, moist subsoil."—*Annals of Hort.*

CAMELLIA JAPONICA.—Of the many ways of propagating this plant, few succeed better, for a new and dear variety, than that we should call bud-grafting. This used to be done by Messrs. Brown of Slough, very generally, and with good success; every bud, with the smallest portion of wood attached, made a plant. The stock was cut down to within two inches of the surface, and the small piece of wood, with the bud attached, grafted on the top. Many ways may be employed to join these, and the only necessary precautions are, first, to leave a bud at the top or highest point of the stock itself, and to insert the graft so as to bring down the bud in it below the level of that of the stock, but on the opposite side. Whether this is by a sloping cut, (splice-grafting,) or by notching the stock and placing the graft on a wedge, (cleft-

grafting) or by saddle-grafting, it matters not. A good fit is necessary, and the barks of the stock or graft, must exactly meet on one side, at the least, and by these means you may make a plant of every leaf or eye.—J. W. *Gardener's Gazette*.

... ..

ANTS.—However these pests may plague you, all you have to do, is to make deep holes with a crow-bar, say two to three feet, and carefully withdraw the instrument so that the hole may be open; thousands, aye millions, of these little pests will fall down them, and not get out any more; in fact, the place will, in time, be completely cleared. When they congregate away from plants, boiling water will settle their accounts quickly; but the former method will do any where, if the ground will allow of holes being made, and the holes being kept open. In some light soils it is difficult, but if you can do it in no other way, soak it well with water first.—*Annals of Horticulture*.

[A writer in one of the French Horticultural Journals, says that he has used the fresh leaves of the tomato, with success, to drive away ants.—ED.]

... ..

Mr. FORTUNE.—Two years ago, the London Horticultural Society, with praiseworthy enterprise, despatched Mr. Fortune to China, for the special purpose of making collections of all the most interesting trees, shrubs and plants, cultivated in that country, and which, previous to the late treaties, were not to be obtained by foreigners. We perceive it is now announced that he has just returned to England. His collections, in eighteen glazed cases, have arrived in beautiful condition, and will be put in course of culture at the Society's garden.

The gardening world look forward with great interest to the results of this collection. The Chinese are the most patient and skilful of merely practical gardeners. Their double flowers are strikingly beautiful; and some of their fruits—as for example, the peaches of Pekin, are represented as of extraordinary size and excellence. The climate of a considerable part of China is so similar to that of this country, that many of its trees and shrubs prove perfectly hardy here, as for example the Chinese Magnolias and Wistaria.

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WEIGELA ROSEA.—This is one of the new plants sent home a year ago by Mr. Fortune, to England, from China. Its present appearance in the Society's garden, is thus noticed in the *Gardener's Chronicle*: "In the adjoining garden was a fine plant of *Weigela rosea*, sent home from the north of China. It has the appearance of a *Syringa*, (*Philadelphus*) with opposite, and nearly sessile leaves, of about three inches in length; and monopetalous tubular flowers of a delicate rose-color, hanging in loose clusters of from three to five at the end of every little side branch. This valuable acquisition to our gardens, has hitherto been kept under glass; but it is not improbable that it may yet turn out to be hardy. In the house recently erected in the hardy department, a thriving specimen of *Calystegia pubescens* will soon be in flower. This was sent from Shanghai, by Mr. Fortune, under the name of a *Double Convolvulus*, and is the first plant of its order that has been mentioned as producing double flowers. The latter are of a delicate pink color. If it should prove hardy, it will be a valuable addition to plants of that kind."

DOMESTIC NOTICES

SUPERB NEW CAMELIAS.—The most remarkable novelties in the horticultural world at home, are the new Camellias which have been raised by COL. WILDER, of Boston. Among all the exquisite sorts that the skill and long-continued devotion to this plant have produced in Europe, we may safely say that none surpass in beauty of colour and perfection of form, these two new American varieties.

These Camellias were first exhibited on the 14th February, and the Massachusetts Horticultural Society, in their usual handsome manner, immediately signified their appreciation of their merits, by awarding their originator a PIECE OF PLATE of the value of fifty dollars.

The following extract from the proceedings of the Society comprises a full description of the new Camellias, and we therefore place it upon record:

"At a meeting of the Massachusetts Horticultural Society, on Saturday, Feb. 14, 1846, a vote was passed, directing the committee on Flowers to take special notice of the fine seedling Camellias exhibited at that time by Marshall P. Wilder, President of the Society.

"Agreeably to this vote, the Flower Committee submit the following report:

"The number of seedling Camellias exhibited was five. Two of them were of surpassing beauty and perfection. As the committee have had the pleasure of often examining the extensive collection of the President, as well as those of other gentlemen in the vicinity, embracing the most perfect varieties known among amateurs, they feel themselves sufficiently acquainted with this beautiful class of flowers, to judge the comparative merits of the seedlings under consideration, and they have no hesitation in pronouncing them as varieties of the *very first order*, and such as will be difficult to surpass in this or any other country. The production of two such remarkable varieties, by one person, we believe unprecedented, and will reflect much honor upon our President abroad, as well as upon the Society of which he is the head.

"We, therefore, recommend that a gratuity be awarded to the President, for these two superb American Camellias, and that it consist of a PIECE

OF PLATE of the value of *fifty dollars*, and of such form and design as he may elect.

"JOS. BRECK, Ch'n."

Description of the Seedlings.

"No. 1. *Camellia japonica*, var. *Wilderi*.

'Leaves one and a half inch broad, and three long, oval, acuminate, slightly dentated, a very dark green, with prominent midrib; petioles short; a shrub of free, upright, but rather slender growth; buds quite round, with pale-green scales; flower medium size, three and a half to four inches in diameter. Colour delicate clear rose; petals 75 to 80 in number, imbricated, of the most perfect rose-leaf shape, and arranged with most exquisite regularity, from the circumference to the centre; corolla very round, persistent, free in its inflorescence, every flower expanding perfectly, retaining its beauty for a long time.

"The superiority of this variety, when compared with those established favorites, the Old Double White, Lady Hume, Imbricata, and others, is its beautiful round petal, with scarcely a serrature or indentation on the edge.

"Raised from the seed of the single red *Camellia*, fertilized by *Camellia japonica*, var. *punctata*; the mother plant and all the stock, with the exception of a single graft, having been destroyed by fire, in the year 1841.

"No. 2. *Camellia japonica*, var. *Mrs. Abby Wilder*.

"The name was given by the committee, in honor of the lady of the President. This variety is a very beautiful one—a vigorous shrub of upright growth and strong branches; foliage large and handsome; leaves four inches long, by two and a half broad, roundish oval, a little reflexed, coarsely dentated, acuminate, with pale prominent midrib and nerves; yellowish green, resembling in color those of *Camellia japonica* Lady Hume; bud round with pale green scales; flower large, four inches or more in diameter, thick, full, and perfect; petals of beautiful form, very numerous, 90 to 100 in number; the exterior rows broad, circular, gradually diminishing in size to the centre, and arranged with great regularity; color white, with an occasional stripe of light rose, after the manner of *Camellia japonica* Duchesse d'Orleans; corolla very round and of great depth.

"Produced from seed of *Camellia japonica* var. *Middlemist*.

"The other varieties were not so remarkable as those described, but still worthy of notice, and equal in beauty to many varieties highly esteemed. As they have now bloomed for the first time, their character cannot be justly determined.

"No. 3 is a flower above medium size; color purplish crimson; fine shape, large petals, rose-leaved, perfectly arranged, compact with a full centre.

"No. 4. A beautiful flower, of medium size; color of the outer petals carmine, fading out to the centre to a fine deep rose color; petals spirally arranged.

"No. 5. Color bright rose, blotched with white; similar to *Camellia japonica* imbricata, but the color not quite so brilliant, and about the same size

"Having seen only the flowers of the three last varieties without the foliage, we are not able to give a full description; but it is not these varieties that the committee would point out to the Society as worthy the gratuity, but those first described *Camellia japonica* Wilder and Mrs. Abby Wilder.

"All of which is respectfully submitted.

"JOS. BRECK,

Chairman of the Flower Com.

"It was voted that the foregoing reports be entered upon the records, and published in the transactions of the Society."

The Massachusetts Horticultural Society have also voted a PIECE OF PLATE of the value of fifty dollars, to Messrs. HOVEY, of Boston, as a special premium for the Strawberry raised by them—HOVEY'S SEEDLING, a sort, which, after twelve years' experience, has proved one of the best.

And to SAMUEL FEAST, Esq. of Baltimore, they have given the Society's LARGE GOLD MEDAL, as a special premium for that beautiful seedling Rose, originated by him, the *Queen of the Prairies*, which they consider "the type of a new class of Roses, and without a rival in this climate for pillars, arbors, &c."

This liberal spirit, which dictates the encouragement of zealous and enthusiastic horticulturists, and singling out newly originated varieties of plants and fruits of high value, makes them the objects of the Society's approbation, and thereby giving them a more extended passport to public favor, we cannot too highly admire.

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THE FINEST CHERRIES.—While we write these notices the cherry season is at its height, and we have been pleasantly engaged, for the last two hours, in examining and tasting many varieties. Among all the light-coloured cherries, we find none to surpass, on the whole, for flavour, texture of the flesh and beauty of appearance, the DOWN-TON. It is superior to *Elton* in this climate. The Flesh-coloured *Bigarreau*, (*Bigarreau couleur de chair*), is a very beautiful fruit, more tender-fleshed than most of its class, and really one of the best. It is fully equal in this climate to the *Bigarreau* (or *Yellow Spanish*) in flavour—and is perhaps rather sweeter. *Black Eagle* stands unrivalled for high flavour among black cherries, as *Black Tartarian* does for size and productiveness. For transparency and delicacy of flavour, the *Belle de Choisy* bears off the palm. Manning's Early White, Bowyer's Early Heart, and Rivers' Early Amber, are evidently all sub-varieties of the old Early White Heart, and not very distinct from it. Holland *Bigarreau* is one of the largest and most beautiful of all the firm-fleshed sorts—and no collection is complete without Downie's Late, to succeed all the foregoing varieties.

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NEW TREE PEONIAS.—One of the hardiest and most magnificent of shrubs in this climate is the Chinese Tree Peony.

We are therefore highly gratified to learn that Professor JACKSON of Schenectady (whose unique garden near Union College is the cynosure of all eyes turned thitherward) has succeeded in raising

from the seed some remarkably fine new varieties of this plant, which are likely to surpass in beauty any of the Chinese species or the European seedlings from them.

Among these we learn there is one bearing large, perfectly double, *pure white* flowers, resembling those of the herbaceous *P. whiteji*. This will be a great acquisition to all gardens. Several others are novel in colour, double, and of handsome habit of growth, etc. Among them is a flesh coloured variety; another with pink petals; another nearly full double with the purple stripe of *Papaveracea*—and still another of a very *pale orange*. And these are only a portion of Professor J.'s promising seedlings. As soon as another blooming season is past, we are to have a full account of these really most valuable acquisitions.

We learn that the parent of all these seedlings, is the Chinese poppy-flowered Chinese Tree Pæony (*P. papaveracea*), the single species well known in our gardens. This tendency, which it shows, to run into new double varieties, is a most valuable one to the horticulturist—and since the plant is so well suited to our climate we cannot too strongly recommend the sowing of the seeds with a view to originating a great number of charming sorts. Fertilized with the pollen of the sweet scented Chinese herbaceous sorts (*P. fragrans*), we may probably obtain a hybrid that, to the splendid large flowers of this shrub, shall add all the fragrance of the rose.

The seeds of the Tree Pæony do not germinate till the second year, if planted in the spring, or even later in the autumn. When planted as soon as they are ripe, they will however mostly germinate in the ensuing spring. Nothing is more simple than their after culture. They absolutely require nothing but good garden soil, and an open airy exposure. The *deeper* the soil the taller and stronger will be the growth of the shrub.

BEAUTIFUL TREE.—How few persons are there who are familiar with that beautiful tree the YELLOW-WOOD, *Cladastrus tinctoria*, (Tor. & Gray,) formerly known to botanists as the *Virgilia lutea*.

Early in June a luxuriant specimen of this tree, in our grounds, about 14 feet high, bloomed most abundantly, and we cannot sufficiently express our admiration of its many charms at that season. The Yellow-wood belongs to the same natural order as the Locust and the Laburnum, (*Leguminosæ*.) Its flowers resemble in general appearance those of the Laburnum, but they are *pure white*, and the clusters are longer and more gracefully formed. The leaves, however, instead of being rather thin and light, like those of the *Locust* and *Laburnum* is rich and heavy like those of the ash. Although pinnated, they form, from the large size of the leaflets, a rich dark massy head of foliage, and over this is thickly sprinkled the airy clusters of snowy blossoms which are slightly fragrant. It is by far the handsomest tree of its tribe; and taking into account its perfect hardiness—vigorous, healthy growth, and clean broad foliage, it must be placed among the most desirable of all ornamental trees for the lawn and pleasure grounds.

The trunk of the *Yellow-wood*, when the tree is

well grown, is remarkable for its smoothness, and the greenish grey colour of the bark, resembling a little in this respect that of the beech.

This tree is a very rare one. In its native localities, Tennessee and Kentucky, it is confined to a small district. It is so little known that both Pursh and Nuttall never appear to have seen it in blossom; both evidently being misled by the specific name of Michaux; and both therefore erring in describing its flowers as *yellow*.

This is usually considered a small tree by botanical authors, but we have seen specimens in some of the fine old gardens in the suburbs of Philadelphia, more than 40 feet high, and exceedingly handsome in their heads and trunks. No tree is better deserving of propagation than this. It grows readily from the seeds, and we call attention to it now in the hope that the few persons who are in possession, or are in the neighborhood, of bearing trees, will carefully save all the seeds and endeavour to multiply it.

The name, *yellow-wood*, is derived from the hue of the heart wood, which imparts a lively yellow colour to water, and is we believe sometimes used for dyeing.

Torrey and Gray, in their excellent *Flora of North America*, have adopted Rafinesque's name for this genus, which, as they remark, "is wholly distinct from *Virgilia*."

A VALUABLE NEW EVERGREEN.—We are almost destitute, in the climate of the North, of handsome *evergreen shrubs*, for the open garden and shrubbery. We have been much gratified on this account to learn that the pretty shrub called the *Variegated leaved Japan Euonymus*, proves perfectly hardy, wherever it has yet been tried out of doors, for the last three winters. It grows, as we learn, in Japan about twenty feet high,—and with us will probably form a shrub of 10 or 12 feet. It has oval, rather thick leaves, (about half as large as those of the quince) which are bordered on the edge with a silvery margin. The pale pink or white flowers, are borne in July. It grows very freely from cuttings or layers and will, we trust, soon be everywhere planted. It will doubtless make a good low evergreen hedge for the garden, and will bear clipping well.

TWO SORTS OF THE LOCUST TREE.—Pray inform me if there are really two varieties or species of the Locust tree. I believe the books only give one species, the Yellow Locust; but I notice so decided a difference in the growth of those in this part of the country and those I knew in Pennsylvania that I suppose them to be distinct. Yours, W. H. F., New Haven, Con.

[There is only one species of the common Locust tree recognized by botanists—*Robinia pseud-acacia*, but there are several varieties of it produced by cultivation, in gardens.

Still there are two very distinct and strongly marked native varieties, well known on the Hudson, and in some other parts of the country. These are popularly recognized as the *Yellow Locust*, and the *Seed Locust*. They are perfectly distinct in their habit of growth, and are said to differ in their value as timber trees. The first and most common

is the Yellow Locust, which, when full grown, forms a tall trunk with a rather erect and narrow head, and bears seeds but sparingly. The second is the Seed Locust, which forms a much larger tree, with a lofty but spreading head, and many diverging branches. The bark is rather darker coloured, and the shoots at the ends of the branches are smaller, and more numerous. This kind produces its seeds in such abundance that the branches are thickly hung with pods almost every autumn.

As a timber tree, the Seed Locust is not in this neighborhood considered quite so valuable as the Yellow Locust. But as an ornamental tree we consider it in every respect far superior. Indeed, when the Locust tree is planted for ornament, this is the only one that is worthy of attention.

The common Yellow Locust, beautiful as it is in its varying, lively green foliage, when young, no sooner becomes large, than it becomes a meagre and half-starved looking tree. Its head is full of half-dead branches, and is entirely wanting in dignity and breadth—while it has also lost the lightness and airiness which distinguished it when young. Extremely liable to the attacks of the locust-borer, its branches, perforated by this insect, are broken and lie strewn about the ground after every storm.

The Seed Locust, on the other hand, is as beautiful as the other when young, goes on improving in appearance as it grows old. Its large and broad head of foliage is at once delicate in its portions, and massive in its whole. But little liable to be attacked by the borer, it is very rarely deformed by dead and unsightly limbs.

We should suppose the Seed Locust to be a tree of double the longevity of the other. A couple of years ago, we saw, while visiting on the Hudson at Clermont, the venerable seat of Chancellor LIVINGSTON, an avenue of Locusts of this sort, of great size and beauty. The late Hon. EDWARD P. LIVINGSTON then pointed out to us a Locust tree, of this kind, near the front of his mansion, which is the largest and oldest Locust tree we remember to have seen. Its trunk measures in circumference about twelve feet, and it has a corresponding head. It was a large tree in the Revolution, and we were informed still bears bullets received at that time in a skirmish which then took place in its vicinity.

The Locust tree is a great deal planted for ornamental purposes on the Hudson, and without any regard to the fact that there are two distinct sorts. The Yellow Locust, being most esteemed for timber, is by far the most commonly seen. The Seed Locust is chiefly abundant on the country seats in the upper part of Dutchess County, N. Y. We do not remember ever to have seen it in New England, where the other sort is common, though it may have escaped our notice. It is unquestionably the only sort deserving the attention of the Landscape Gardener. Its marked habit, and the fact that it always reproduces itself from the seed, have led us to think, of late, that it is really a distinct species.

A great merit of the Locust, for pleasure grounds, is this:—however large the trees, or however thickly they may stand, the grass beneath always thrives under them better than under any other tree.

This is partly owing to the lightness and thinness of their delicate foliage, and partly to the fact that the foliage being small does not blow away but lodges in the grass and decays there, thus affording nourishment to the roots of the grass.

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STANDARD ROSES.—Much as I admire those beautiful things,—standard or tree roses, I am afraid they will never become really established in our gardens, or do us much good in the long run. I have had in my flower garden, and on my lawn, about fifty specimens. They were, all but ten, imported plants, got out by a neighbour of mine, at different times within five years. Little by little, I find they have all died off. At first they thrived and bloomed very well. Afterwards they were gradually affected by the winters, and one after another I lost them. Then again, I fancy that our summers are too hot for the tall naked stems of high standards. They seem to get dry and shrivelled, and thereby they affect the growth and health of the top. I am all the more convinced of this since I have seen some specimens grown by a neighbor. He covers the stem with moss, bound around them. This he leaves on all the year. It undeniably gives more vigor and health to the head—but it also gives the whole tree-rose so unsightly—bandaged—a look that I cannot endure it in a neat place. On the whole, therefore, I shall feel obliged to return to the old, and, in the main, most satisfactory mode of growing roses—i. e. on their own roots. Farther south, say at Baltimore, or Cincinnati, where the weather is not so cold in winter, no doubt standard roses will do better.—
An Amateur, Boston.

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MUNIFICENT PATRONS OF HORTICULTURE.—The liberality of the citizens of Boston is widely known, but we desire to express our hearty admiration, at this earliest opportunity, of the spirit which prompted the two handsome donations received this year by the Massachusetts Horticultural Society, for the promotion of the interests of Horticulture. We refer to the donation of \$1000 made in January by the Hon. SAMUEL APPLETON, and another of the same amount in February by JOHN A. LOWELL, Esq. Both these gentlemen are residents of Boston, and both have observed for many years the increasing and wide spread usefulness of the Society, in question. Their approval of its course, and their interest in its further efforts, they have thus signified in a manner that at once reflects the greatest honor on the Society, and credit upon themselves.

The Society has securely invested these donations, and the annual interest of each sum is to be applied in the form of medals, bearing the title of the APPLETON MEDALS, and the LOWELL MEDALS.

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THE BEAUTY OF LAUREL HILL, in June.—Nothing can well surpass the beauty of Laurel Hill (The Philadelphia Cemetery) at this moment. You know its charming site on the banks of the Schuylkill,—and its original charms, as it was an old and fine gentleman's seat before it came into the hands of the Cemetery company. The love of the Philadelphians for flowers is also well known.

Well—at this season, the grounds of a part of Laurel Hill—the oldest part—is literally a wilderness, or rather a bower of roses. The tea rose, and especially the everblooming rose, seems to be the favorite: and such a profusion of fragrant blossoms I never beheld as there are at the present time. Hundreds of the largest and finest tea roses, Ayrshire, Boursaults, and even moss roses are now in full bloom. The variety of monuments is very great, and some are beautiful; and, at least at the present moment, death appears robbed of its horrors, and invested with an air of beauty. I noticed in the ground many rare and curious trees chiefly planted as I am told by one of the leading managers of the grounds and one of its earliest originators, J. Fay Smith, Esq., among them were the Virgilia, the Deodar Cedar, Cedar of Lebanon, and several rare pines—all thriving well and making the place interesting in an arboricultural sense.”—*Extract from a letter from Philadelphia.*

THE PUTNAM RUSSET, VS. ROXBURY RUSSET.—“Pray let us know your opinion now, regarding these two apples. Are they identical, or are they not? There has been so much written *pro* and *con*, and, as it appears to me, *without touching bottom at all*, in some of the agricultural papers, that one is at a greater loss than before.” Yours,

Providence, R. I.

C.

[If our correspondent will only have the goodness to wait till these apples ripen their fruit, this autumn, we can give him a full and *satisfactory* answer. With both these sorts, genuine, before us, it will be hard if the matter cannot be settled in a few moments. Till then, all opinions and historical anecdotes of origin, are of no value whatever. Two things, however, are clear to us at the present moment; first, that more than one spurious “Roxbury Russet” is known by that name in western orchards; and second, the growth of the wood and leaf of young trees in our grounds, that we believe to be the true Putnam Russet, very strongly resemble that of the Roxbury Russet. More in due time.—ED.]

DUTCHESS COUNTY HORTICULTURAL SOCIETY. A Society has been organized this season, at Poughkeepsie, New-York. Dutchess is the county on the Hudson, most celebrated for the fertility of its soil, and especially for the great beauty of its country seats. This new society is in the best hands, and will, we are confident, have a great influence on the improvement of horticulture, on the river generally, since its membership and its prizes are not confined to those living in that single county. The first exhibition took place on the 18th and 19th of June, and was in all respects, a most gratifying and satisfactory one. Five tables, reaching the whole length of the town hall, were loaded with a profusion of flowers and fruits. The arrangement of flowers in devices, was very tasteful and striking. Twenty-five varieties of cherries were exhibited; some of them unusually large. The strawberries were also remarkably fine; several dishes of Hovey’s Seedling were of great size and beauty. But the great merits of the show lay in its vegetables. These were truly of uncommon size, and apparently of great excellence. Cauliflowers

of enormous dimensions, such as are very rarely seen; melons, lima beans, beets, potatoes remarkably large, egg plants, and tomatoes, and excellent Indian corn and cucumbers; indeed, a great variety from the kitchen garden, and all of the largest and finest growth. The next exhibition takes place about the middle of September, and judging from this auspicious commencement, will be in every way worthy of the county and the river. The following are the officers of the Society: Dudley B. Fuller, *President*; Robert Donaldson, Thomas Taber, John F. Sheafe, William Kelly, *Vice-Presidents*; John W. Knevels, *Cor. Sec’y*; Joseph H. Jackson, *Rec. Sec’y*; Stephen B. Trowbridge, *Treasurer*; Josiah Williams, Radcliff Van Wagenen, William P. Gibbons, Josiah W. Wheeler, George B. Lent, Edward K. James, *Ex. Com.*

THE STRAWBERRY QUESTION.—Pretty nearly all the horticultural community are now aware of the different views hitherto entertained regarding the Strawberry culture—and the ground taken, and so strongly urged, by our friend N. LONGWORTH, Esq., of Cincinnati.

We have given this subject a pretty careful and thorough examination this season, and have compared our own views with those of some of our soundest horticulturists in various quarters.

We shall therefore give our more matured opinion, somewhat in detail, at the first convenient moment,—probably in our next number.—ED.

THE BLACK PRINCE STRAWBERRY.—We have given an engraving of one of the very finest new Strawberries, in this number, and have spoken of its most excellent qualities.

Our opinion for three years past has been that the BLACK PRINCE, as known in our gardens, is on the whole the *highest* flavored, and the best strawberry yet known in this country. Now, (June 24th,) that the strawberry season is nearly over here, we may repeat that after having compared it with Swainstone’s Seedling, Princess Alice, Hovey’s Seedling, Ross’ Phoenix, Myat’s Eliza, Deptford Pine, British Queen, and all the other leading sorts of acknowledged merit, we still consider the Black Prince superior to all in very *high flavor*, and equal to any other sort in productiveness, size and beauty. Every one that has tasted it here this season has immediately concurred in this opinion. It also has proved with us the *hardiest* large strawberry that we have ever cultivated—and we are glad to learn from other growers, in whose hands we have we have placed it, that it promises to do equally well in various parts of the country. We received the Black Prince from the West of England, five years ago. From the fact that Thompson does not rate it among the first, we infer that it succeeds better here than in England.

TO RESTORE THE HEALTH OF LEMON AND ORANGE TREES.—I cultivate but a few plants in a simple way and among other things I have a great fondness for lemon trees. Like many other persons I have been annoyed very often at finding, every now and then, one of my lemon trees turning yellow in all its leaves, and looking pretty much as

though it had a fit of the jaundice. I have tried at various times all sorts of remedies, and applied to all the scientific gardeners for a bit of advice without getting much satisfaction from the latter, except "Shift the pot;" which latter advice I often followed without getting any benefit.

Last summer I took it into my head to try *soot*, which I have found to be an uncommonly active stimulant. I removed the top soil on the surface of each pot or tub; I replaced it with new fresh mould, and gave the whole a pretty liberal top-dressing of soot. Before a fortnight went by the trees began to improve, and soon took a fresh deep-green look that delighted me. They are all perfectly healthy and vigorous now, and I have repeated the experiment this spring, with other orange trees, with, so far, the best results. By giving this a place in the new journal, you will no doubt serve amateurs like myself, as well as oblige, yours, respectfully. *Citrus. New York, June 10th.*

.....
BLACK BIGARREAU OF SAVOY.—We have compared specimens of this cherry, grown here this season, with a cherry we obtained from the late Mr. Parmentier of Long Island, many years ago, and find them perfectly identical in fruit, leaf, and growth. Will any of the pomologists of Boston inform us how this cherry, (B. of Savoy,) differs from the "*New large Black Bigarreau*" of that neighborhood, which, as a distinct sort, we have never yet been able to get a sight of?

.....
THE LONGWORTH VINEYARDS.—Mr. Longworth of Cincinnati, very obligingly forwarded us last month, a case of American wine, the product of his vineyards, on the banks of the Ohio.

We have been in the highest degree pleased with these wines. They severally are the product of the Catawba, Alexander's, Isabella, and Missouri grapes, all native sorts. The very best wine is the "Catawba," of which we received samples of several vintages. The character of the wine is that of excellent Hock, like the better class wines of the Rhine. We sent a bottle of this Catawba wine, to one of the oldest and most respectable wine houses in this country, Messrs. Bininger & Co. of New-York. These gentlemen wrote us in reply: "We are very much gratified in having an opportunity of tasting this wine, which is the first American wine, that deserved the name of wine, that we have ever seen. It strongly resembles Hock, and we should have pronounced it such."

The Catawba, we learn from various growers at Cincinnati, proves as yet decidedly the best wine-grape. The Isabella gives a wine of rather less body, and less character.* The Alexander's, or Schuylkill Muscadell, gives a stronger wine, with much of the character of Tenerife or Madeira. These light Hock wines, which we understand are now produced in pretty large quantities on the banks of the Ohio, are precisely suited to our climate; and as the Hock character seems to be the natural one afforded by most of our native grapes, we trust it will not be disturbed by any attempt to

manufacture other wines of a stronger and less wholesome character. These wines are entirely pure, without the addition of alcohol, and the temperance cause has every thing to gain, and nothing to lose, by a general production and consumption of such a light and wholesome beverage. This, every one familiar with the hock and claret districts of Europe, where ardent spirits are not used, will cheerfully bear testimony to. Indeed, until such wines can be produced and afforded, as they will soon be, pure, and at low prices at home, only a small class of persons in this country, will ever know what pure light wines really are. What is sold as such, by the retail dealers in the country generally, is so brandied and manufactured, as to become worse than ardent spirits itself.

The vineyard product of the American grapes is considerably larger than that of the European. We understand the crop of this season looks well as yet, on the banks of the Ohio. Mr. Longworth writes us, June 18th—"Our June is cool, and our late cold rains, for three or four days, have caused the grapes to drop in many vineyards; but the promise of a fine crop is yet good. We shall know in three or four weeks. Grapes disregard heat and drouth with us, but dislike cold, and wet hot weather."

.....
BUFFALO HORTICULTURAL SOCIETY.—We received from LEWIS F. ALLEN, Esq., President, just as the last form of the Horticulturist was nearly ready for the press, a Report of the exhibition of this Society, held on the 18th of June. Judging from the Report, the show of fruits, flowers and vegetables, in extent and beauty, must have been magnificent. Over one hundred and fifty bouquets, of exceeding beauty and richness, were exhibited, mostly from the Ladies of Buffalo, together with a very great variety of cut flowers from the gardens and green-houses, arranged in every variety of style which the taste of the lady exhibitors could devise. We regret that we have not room for particular descriptions.

Fruits.—The display of Strawberries was very fine, including choice samples of the Methven, Hovey's Seedling, Stoddard's Washington, the Loughborough, Chili, Wilmott's Superb, Kerr's Seedling, Seedlings from B. Hodge, the Roseberry, Carolina, white and red Alpine, Bishop's Orange, Old Pine, Scarlet Seedling, &c. Of Cherries, there were the Turkey Bigarreau, Bigarreau de Lyon, [?] Mayduke, Elton, Holman's Duke, Ox-heart, &c. There was also a fair show of Gooseberries, and a fine Orange tree in full bearing. Of Vegetables also, there was a handsome exhibition.

We quote the closing paragraphs of the Report, made by C. F. S. THOMAS, Esq., Rec. Sec.:

"The Committee cannot close their report without rendering acknowledgment for the efficient aid afforded to the Society by the Ladies' Committees, both senior and junior; early on the ground, their presence and efforts shone conspicuously in the arrangement of the exhibition and contributed in no small degree to the success which attended it.

"The Committee cannot but share in the general opinion expressed that the June exhibition far

* One bottle of Isabella—a sweet wine—resembled Muscadell.

surpassed any previous effort of the Society, and they confidently hope that succeeding ones, will show that our efforts are still progressive, and that

the influence of our Society may have a lasting and beneficial effect upon the Horticulture of our city and adjacent country."

MASSACHUSETTS HORTICULTURAL SOCIETY.

[WE hope hereafter to give full and authentic reports of the proceedings of the Massachusetts, and of the Pennsylvania Horticultural Societies. Our arrangements were not perfected in season to allow us to do so in the present number. Exhibitions of all other Societies of importance, shall also, whenever worthy of notice, receive attention in our columns.—ED.]

Exhibition of Saturday, June 6, 1846.

FLOWERS.—From M. P. Wilder, President of the Society, 8 pots of *Calceolarias*, (new vars.) 5 pots fine new *Fuchsias*, viz: *Vesta*, *Colossus*, *Britannia*, Smith's *Queen Victoria*, *Randum*; two *Ereans*, tricolor and ampullacea, *Azalea indica*, var. *Danielstana*.

From Wm. Meller, a fine display of Seedling *Geraniums* and two bouquets.

From Wm. B. Richards, cut flowers in variety.

From Parker Barnes, *Aquilegias*, *Pæonies*, *Fuchsias*, *Roses*, and cut flowers in variety.

From Joseph Breck & Co., 4 bouquets, *Irises* of sorts, *Anemones*, *Pæonies*, *Roses*, *Dictamnus fraxinella*, 2 var., with cut flowers in variety.

From A. Aspinwall, a great variety of fine *Roses*.

From Samuel Walker, beautiful *Ranunculus* and cut flowers in variety.

From Walker & Co., beautiful English *Irises*; one plant of *Hesperis matronalis plena*, two of *Cactus*, two bouquets, and cut flowers.

From John A. Lowell, by Wm. Doyle, an assortment of green house plants, viz: six *Geraniums*; *Kenedia coccinea* and *monophylla*; *Cactus speciosus*, *vandesia* and *jenkisoni*; *Cereus napolensis*, *flagelliformis* and *scottii*; *Illicium floridum*, *Clematis azurea grandiflora*, *Melastroma trinerva*, *Cymbidium aloenolium*, two *Oncidiums*, *Hypericum*, *Amaryllis*, &c.

From Miss Russell, a fine bouquet, and basket of flowers; *Roses*, *Laburnums*, and cut flowers.

From J. L. L. F. Warren, one large and eight small bouquets, *Amaryllis*, &c.

From Cheever Newhall, *Chionanthus virginicus*, and *Liriodendron tulipifera*.

From Rev. Samuel B. Babcock, Dedham, a variety of *Boursault Roses*.

From Messrs. Winship, by E. A. Story, a large vase of *Chionanthus virginicus*, (a beautiful shrub;) one of the large circular stands filled with a great variety of cut flowers, including *Azaleas*, *Pæonies*, *Irises*, *Roses*, *Loniceras*, *Laburnums*, &c.; one large bouquet, and fine specimens of *Papaver bracteatum*.

From Messrs. Hovey & Co., fine *Anemones*, *Geraniums*, *Verbenas*, and other cut flowers; six new and fine *Cereuses* in pots; six roses in pots, and the following twelve green-house plants; *Achamenes picta*, *A. longiflora*, *Gardenia florida*, *Erica savileana*, *Babingtonia camphorosmae*, *Polygala latifolia*, *Cytisus speciosa*; *Nuttalia*, from Texas; *Boronia viminea*, *Diplacis puniceus*, *Mahernia odorata*, and *Crassula seedling*; also, six pots of *Fuchsias*, viz: *Formosa elegans*, *Chauvierii*, *Defance*, *New Globe*, *Britannia* and *Majestica*.

For the Flower Committee,

JOSEPH BRECK, Ch'n.

AWARD OF PREMIUMS.

On Geraniums. Calceolarias. and Bouquets.—The committee appointed to award the premiums on *Pelargoniums*, *Calceolarias*, and *Bouquets*, report that they have attended to their duty, and award as follows: For the best six *Pelargoniums* in pots, (having reference to previous displays,) a pre-

mium to Wm. Quant, of \$6. For the 2d best six plants, a premium to Wm. Doyle, gardener to J. A. Lowell, Esq., of \$4. For the best four varieties of *Calceolarias*, a premium to Wm. Quant, of \$3. For the best Bouquet, a premium to Messrs. Winship, of \$2. For the 2d best do., a premium to Miss Russell, of \$1.

The Committee regret that there were not more competitors for *Calceolarias*, as this flower is well worthy of the amateur's attention.

C. M. Hovey, Ch'n.

The Committee—Wm. Quant, Thomas Needham, and Edward Allen—award the following premiums for *Cactus* and other pot plants, not included in the above: To Messrs. Hovey & Co. for the best six *Cactuses*, of sorts, \$3. To William Doyle, for 2d best, \$2. To Messrs. Hovey & Co. for the best display of green-house plants, a premium of \$5. To William Doyle, the 2d premium, \$5. The Committee recommend a gratuity of \$5 to the President of the Society, for his beautiful display of green-house plants. For the Committee,

WM. QUANT,

On Fuchsias.—To William Quant, the 1st premium, \$6. To Messrs. Hovey & Co., 2d premium, \$4.

JOHN GALVIN, Ch'n.

FRUITS.—Grapes: Mr. John F. Allen, of Salem, presented ten varieties of this delicious fruit. Some of the bunches were finely grown, and as a whole, did Mr. Allen great credit. The following are the names of the sorts:—Black Prince, Black July, Black Hamburg, Early White, Chasselas de Bar sur Aube, Frontignan, Grizzly, Miller's Burgundy, Muscat of Alexandria, Pitnaston White Cluster. Also, Nectarine, var. Tawney, and two varieties of Peaches—Coolidge's Favorite, and Royal George, (cling.); Green Gage Plums.

From T. Motley, jr., of Dedham, Black Hamburg and White Chasselas Grapes; also, a box of Early Virginia Strawberries.

By J. L. L. F. Warren, Brighton, four varieties of Strawberries, viz: Willey's Seedling, from Cincinnati, Ohio; Motter's Seedling, do.; Hudson, and Early Virginia; also, Black Hamburg Grapes.

For the Committee,

S. WALKER, Ch'n.

VEGETABLES.—From J. Lovett, 2d, twelve stalks *Victoria Rhubarb*, weighing 23 lbs. From T. Motley, jr., by J. Galvin, a brace of Cucumbers. From A. D. Williams, Rhubarb. From Thomas Galvin, Newport, R. I., two brace of Roman Emperor Cucumbers. For the Committee,

A. D. WILLIAMS, Jr., Ch'mn.

Exhibition of Saturday, June 13th, 1846.

FLOWERS.—From M. P. Wilder, President of the Society, nine pot plants; four superb new *Geraniums*, as fine as ever exhibited, viz: *Sophia Matilda*, *Grand Monarque*, *Excelsa*, and *Duchess of Sutherland*; *Fuchsia gigantea*, *Miller's Victoria*, and two *Venus victrix*.

From J. S. Cabot, fifteen varieties of *Pæonies*, many of them new and splendid; among them were *P. formosa*, *speciosa striata*, *elegans*, *claptoniensis*, *anemoniflora striata*, *Reine Hortense*, *grandiflora carnea plena*, *bicolor plena*, *Victoria modeste*, *Reevesii*, *Pottsi*, *Whiteji*, &c. Mr. Cabot's collection of *Pæonies*, embraces the choicest varieties in the country.

From Messrs. Winship, a magnificent pyramid of flowers; a great variety of superb cut flowers, filling the two large vases; *Roses*, in great variety; *Azaleas*, and other flowers, in profusion.

From Wm. Kenrick, by Miss Russell, one large and four small bouquets; also, a fine show of *Pæonies*.

From J. L. L. F. Warren, one large and six small bouquets, *Phloxes*, *Digitalis*, *Pæonies*, *Amaryllis*, and cut flowers in great variety.

Exhibition of June 20, 1846.

From Augustus Aspinwall, a large collection of Roses, splendid varieties, and fine specimens.

From S. R. Johnson, *Pæony whiteji*, hardy and perpetual Roses, in great variety.

From Samuel Walker, fine *Ranunculus*; *Phloxes*, *Campanula persicifolia alba*, *Dictamnus fraxinella*, var. *alba*, and cut flowers in variety.

From Walker & Co., two bouquets, two clusters of *Noisette* Roses, with an immense number of buds and flowers; *Roses* in variety, *Dahlias*, *Pæonies*, and other cut flowers.

From Joseph Breck & Co., a great variety of *Roses*; fine *Anemones*, and *Ranunculus* in great variety; *Campanula persicifolia plena*, and var. *alba*, *Pæonies*, &c.

From Parker Barnes, *Pæonies*, *Roses*, *Neapolitan* and dwarf *Rocket Larkspurs*, *Pansies*, *Fuchsias*, and other cut flowers. Also, six pots of plants, viz: *Fuchsia conqueror*, *Lilium japonicum*, seedling *Cineraria*, *Crassula*, *Cytisus* and Ever-blooming *Pink*.

From John A. Kenrick, a fine flower of *Magnolia macrophylla*, *Pæonies*, *Roses*, and other cut flowers.

From F. W. Macondry, a variety of fine roses.

From Wm. Doyle, one large bouquet.

From John Hovey, three bouquets.

From William Meller, eight pot plants, viz: one splendid *Russelia coccinea*, 3 *Fuchsias*, *Geranium*, *Euphorbia splendens*, *Rose*, (*Village Maid*), and *Amaryllis*. Also, two bouquets, fine *Pinks*, and other cut flowers.

From Wm. Quant, splendid *Rocket Larkspurs*.

From William E. Carter, one large and four small bouquets, *Pæonies*, *Phloxes*, *Hyacinthus plumosus*, and a great variety of other choice perennials.

From Orr N. Towne, *Ipomea laevis*, and a fine *Dahlia*.

From John Dunklee, a branch with flowers of *Liriodendron tulipifera*.

From E. M. Richards, *Iris*, *Pæonies*, and other cut flowers.

From Hovey & Co., a magnificent display of *Roses*, including numerous *Perpetual*, *Moss*, and other fine varieties.

For the Committee, Jos. Breck, Ch'n.

AWARD OF PREMIUMS.

On Bouquets.—D. Hagerston, W. Quant, E. A. Story, judges. 1st premium of \$2, to Miss Russell. 2d premium, of \$1, to J. L. L. F. Warren.

Pot Plants.—For the best 6 plants, 1st premium of \$2, to Wm. Meller. 2d premium of \$1, to Parker Barnes.

Cut Flowers.—D. Hagerston, W. Quant, Judges. To Messrs. Winship, for a pyramidal design of cut flowers, and for loose flowers in the vases, a gratuity of \$3.

FRUIT.—J. L. L. F. Warren, of Brighton, presented several dishes and boxes of fine *Strawberries*, viz: *Bishop's Orange*, *Early Virginia*, *Hudson*, *Jenney's Seedling*, *Willey's Seedling*, *Hovey's Seedling*, and *Mottier's Seedling*.

By Isaac Fay, of Cambridgeport, *Hovey's Seedling*, and a *Seedling* raised by Mr. Fay, of large size and fine appearance.

From A. Aspinwall, a basket of extra large *Hovey's Seedling* *Strawberries*.

Two boxes of *Strawberries*, by Parker Barnes. We should like to taste other specimens of this variety, as we so far think well of it.

Three boxes of *Hovey's Seedlings*, and two of *Virginia* *Strawberries*, by John Gordon, of Brighton.

Josiah Richardson, of Cambridgeport, three *Seedlings*, all of good size, and a box of *Hovey's Seedling* *Strawberries*.

From Hovey & Co., specimens of *Hovey's Seedling* and *Boston Pine* *Strawberries*.

John F. Allen, of Salem, presented the following varieties of *Grapes*, viz: *White Cluster*, *Black Hamburg*, (fine), *Muscata* of *Alexandria*, *Early Black July*, *Chasselas de Bar sur Aube*, *Grizzly Frontignan*, *White do.*, and *Black Portugal*. Also, some very fine *Figs*, *Peaches*, and *Nectarines*.

[By F. W. Macondry, a dwarf *Apple-tree*, bearing on its branches 28 apples, about half grown.]

The exhibition of fruit to-day, was very creditable to the cultivators. The seedling specimens by Messrs. Fay and Richardson, are a proof of the interest taken in the country, to produce something of the best quality.

For the Committee, S. WALKER, Ch'n.

VEGETABLES.—From F. W. Macondry, *Prince Albert* *Peas*.

From John Gordon, a fine *Cucumber*.

From Josiah Bradley, an ear of *Egyptian corn*.

From D. J. Curtis, *Egyptian wheat*.

For the Committee, A. D. WILLIAMS, JR., Ch'n.

FLOWERS.—The display of flowers this day was unusually brilliant. The *Rose* appeared pre-eminent; and never was shown in greater variety or perfection in the Society's rooms. It was premium day for *Roses*, *Pæonies*, *Pinks* and other choice flowers, which brought together numerous exhibitors, who occupied every part of the Hall, and filled every stand and vase with the choicest productions of Flora. It was necessary to limit many of the contributors to a smaller space than they desired, that all might find a place for their flowers.

M. P. Wilder, President of the Society, exhibited a splendid collection of new *Geraniums*; among them were the *Duchess of Sutherland*, *Beauty Supreme*, *Rosetta Superb*, *Symmetry*, *Flash*, *Lady Sale*, *Excelsa*, *Sophia Matilda*, *Grand Monarch*, *Constellation*, *Miguel*, *Armenia*, *Nestor* and *Unit*. Seven pots of *Fuchsias*. His display of *Roses* was most superb. In his stand were about 1,000 blooms, embracing a dozen varieties of splendid new *Moss*, a great variety of *Hybrid Perpetuals*, and innumerable varieties of other classes of *Roses*, including new whites. Mr. Wilder's *Roses* were very fine—but as he declines competing with the members of the Society, no premium was awarded. We were glad however, to notice that the judges recommended a gratuity.

J. L. L. F. Warren made a fine display of a great variety of *Roses* and other cut flowers, including fine specimens of *Digitalis*, two var., *Clematis alpina*, *Campanula persicifolia*, *Pæonies* and other cut flowers. Also, one large circular flat bouquet or design. One fine bouquet, composed of *Pansies*, and 20 other fine bouquets of various sizes and patterns.

From John Hovey, three pots of *Japan Lilies*, very beautiful specimens; also, three bouquets and cut flowers.

From Wm. Meller, a great variety of fine *Pinks*; two bouquets and cut flowers.

From Messrs. Hovey & Co., a fine plant of the new *Veronica speciosa*, the first time of its flowering in the country. It has elegant spikes of deep blue flowers, which change to nearly white after opening; also, *Erica saxifraga*, *Crassula Seedling*, *Maid of Orleans*, *Jasmin*, *Acichmeus picta* and *longiflora*, and *Gloxinia variegata*; 500 varieties of *Hardy* *Roses*; 30 varieties of *Perpetual* *Roses*; 20 varieties of *Moss* *Roses*, and 5 kinds of *Prairie* *Roses*—the *Hardy* *Roses*, including several spotted and striped kinds—among them some new and very magnificent; in all, 2,000 blooms.

From O. H. Mather, Brighton, by Thomas Needham, a variety of *Roses*, beautiful specimens of *Phlox Van Houtii*, and other cut flowers.

From Mrs. J. S. Ellery, by James Nugent, a beautiful specimen of *Stipa pinnata* or *Bird of Paradise* grass, (very graceful.)

From Parker Barnes, cut flowers in variety.

From J. L. Gardner, by Daniel Crowley, a variety of *Roses*.

From Wm. Quant, beautiful specimens of *Double Rocket Larkspur*, various colors; splendid *Double Balsams*, *Roses*, and other cut flowers.

From Wm. Kenrick, by Miss Russell, one large bouquet, two baskets of flowers, small bouquets, *Pæonies*, *Roses*, &c.

From W. E. Carter, three large and two small bouquets, *Pæonies*, and beautiful cut flowers in variety.

From J. S. Cabot, several fine specimens of new *Pæonies*, viz: *Pæonia hercynica*, *alba festiva*, *papaveriflora*, *elegantissima*, *clatoniensis*, *formosa*, *anemone-flora striata*, *whiteji*, *fragrans*, *humel*, and *seedling*.

From Mr. West, Salem, a large circular bouquet, composed of choice *rose buds* and flowers.

From Messrs. Winship, one large *Trisule* (three pointed) design in one of the large *Bradlee* *Vases*; large and beautiful specimens of cut flowers to fill the other vase. A fine display of climbing roses, viz, *Prairie Queen*, *Perpetual Pink*, *Baltimore Belle*, *Superbe*, *Climbing Noisette*, &c.; also, *Persian Yellow*, and other fine *Roses*, including 6 varieties of *Moss*; *Pæonies*, cut flowers, &c.

From John Dunklee, *Roses*, *Kalmias*, *Dianthus barbata*, and other cut flowers.

From Samuel Walker, a great variety of *Roses*, and a fine *Seedling Pink*.

From Walker & Co., six *Pot Plants*, viz: one large *Tre Rose*, four *Cactus*, and one *Crassula*. *Roses* in great variety, *Pæonies*, and cut flowers.

From Capt. Macondry, fine *Roses* and cut flowers in variety.

From Joseph Breck & Co., a great variety of *Roses*, inclu-

along six varieties of Moss, Hardy Perpetual, and other varieties. Also a fine collection of some double American and English Peaches; also fine specimens of Purple and White Marigolds, Lobelia, Delphiniums, Van Houttei Peaches, Pinks, Geraniums, Clematis alpina, Campanulas, and other fine flowers.

For the Committee,

JOSEPH BRECK.

AWARD OF PREMIUMS.

Roses. For the best 30 varieties, Hovey & Co., 1st premium, \$7; Breck & Co., 2d premium, \$6. For the best display to Hovey & Co., \$4. The best 12 varieties, Daniel Walker, 1st premium, \$4; no other competitor. The best 6 varieties, Hovey & Co., 1st premium, \$1; Breck & Co., 2d premium, \$3.

The Committee recommend to M. P. Wilder, the President, for his display of Roses, a gratuity of \$5; to Messrs. Winsupp, a gratuity of \$1, for their display of Prairie Roses.

David Haggerston, William Quant, Alexander McLennan, Judges.

Ranunculus: Best display, S. Walker, \$5; 2d best, Breck & Co., \$3.

Antennaries: The best display, Breck & Co., \$5; 2d best, Hovey & Co., \$2.

William Quant, Alexander McLennan, David Haggerston, Judges.

Ponies: 1st premium to J. S. Cabot, \$5; 2d premium, Breck & Co., \$4. For the best display, William Kenrick, \$3.

Alexander McLennan, David Haggerston, Wm. Quant, Judges.

The Committee on Pinks, Pot Plants, Designs, and Bouquets, have attended to their duty and award as follows:

Pinks—First prize to Wm. Moller, \$4. Second prize to Jos. Breck & Co. \$1. Display, Wm. Moller, \$2.

Pot Plants: First prize to Hovey & Co., \$2. Second prize to Walker & Co., \$1. A fine plant of Veronica species, by Hovey & Co., a gratuity of \$3.

Bouquets and Designs.—Wm. Kenrick, on Bouquets, first prize, \$2; Warren, second prize, \$1. Design, Messrs. Winsupp, a gratuity of \$3.

For the Committee,

PARKER BARNES.

FRUIT.—The Messrs. Hovey presented two large baskets of Hovey's Seedling and Boston Pine Strawberries. The

berries were very large, and the flavor delicious. Hovey's Seedling is well known to cultivators through the length and breadth of the land, and we said he greatly mistaken if the Boston Pine is not found in a few years, in a very good collection. It is perfect in its origin, and will produce a large crop. We recommend both the varieties as deserving of extensive cultivation.

William Gordon, of New-Bedford, by the politeness of Benjamin Rodman, Esq., a box of Gordon's Seedling, color and size fine, flavor only second rate.

Otis Johnson, of Lynn, three boxes of Hovey's Seedling Strawberries, (fine.)

Joseph Richardson, Cambridgeport, three boxes of Hovey's Seedling, and two boxes of seedling Strawberries. We think somewhat favorably of these seedlings, but wish further specimens before we give an opinion.

Five specimens of Hovey's Seedling, and also a large dark colored seedling by Mr. Fay.

Wm. Meller, of Roxbury, Seedling Wood Strawberries.

J. L. F. Warren, of Brighton, Jenney's Seedling; Moller's Red; Hovey's Seedling; Willey's do. Also Red and White Wood Strawberries. The specimens of the White Wood were the best we ever saw. The Jenney's and Moller's Seedling are very acid, and are not worthy of cultivation. These two varieties, as also the Willey's, we think are better adapted to a southern climate. Mr. Warren also presented specimens of the May Duke and Early Bigarreau Cherries.

J. Fisk Allen, of Salem, again graced our tables with a choice collection of his early Green House Grapes. The color and bloom of his specimens of Black Hamburg were very fine. The Grizzly Frontignan is one of the highest flavor and quality to the lovers of fine and high flavored fruit, this variety will commend itself when compared with the Black Hamburg. We will only add it is one of the best.

Mr. Allen also exhibited specimens of the Zinfandel Grapes. Two varieties of Peaches, also fine Nectarines and Figs.

For the Committee, S. WALKER, Chairman.

VEGETABLES.—From Thomas Motley, Jr., by John Galvin, Cucumber of extra size.

From J. A. Kenrick, Victoria Rhubarb.

From J. Hovey, six heads of Cabbage Lettuce.

For the Committee,

A. D. WILLIAMS, Chairman

PENNSYLVANIA HORTICULTURAL SOCIETY.

The stated meeting of this Society was held as usual, at the Chinese Saloon, on Tuesday evening, June 16th, the President in the chair. Premiums awarded, were for objects at the intermediate meeting on the 2d inst. For the best Strawberries, (Hovey's Seedling,) to John C. Engleman. For the next best, (Methven Scarlet,) to Wm. Johns, and special premiums of one dollar each, to J. B. Baxter, for the "Maryland," to E. Middleton, for Brinkie's Seedling, called "Higgin's Favorite," to A. Felton, for "Methven Scarlet," and to Andrew Patton, for the "Hudson." Several Seedlings from Dr. Brinkie, were shown; also, a basket of the white variety, by A. Patten. For the best Rocket Larkspurs to Anthony Felton.

For objects on the present occasion:—For the best Garden Roses, to Wm. Hobson. For the best six named Pinks, and the best American Seedling Pink, to John Finlayson. For the best six hot-house plants, to Wm. Hall, gardener to Caleb Cope. For the best six green-house plants, to Mr. Chalmers, gardener to Mrs. Pepper. For the most interesting collection of plants, to the same. For the next most interesting, for the best indigenous plants, for the best Bouquet, and the best indigenous Bouquet, to Archibald Henderson. For the next best Bouquet, to Wm. Hall. A special premium of three dollars, to James Bisset, gardener to James Dundas, for a beautiful exhibition of Achimenes grandiflora and A. picta.

For the best Cherries, (Carnation) to Andrew Patton, gardener to Mrs. Kohne. For the best Grapes, raised under glass, to James Bisset. The Committee called the attention of the Society to specimens of Fastolf Raspberry, by C. Cope, and a Seedling, the "Cushing," by Dr. W. D. Brinkie.

For the most interesting display of Vegetables, to A. Fel-

ton. For the best Artichokes, to P. Gallagher; and a special premium of one dollar, to Andrew Patton, for Artichokes.

Members elected.—To honorary membership, John D. Steele, of Chester Co., and Dr. Benj. G. Davis, of Augusta, Maine.—Residents, Edward G. Mallory, Charles B. Vogels, Gerhard Vogels, Ezra Stokes, William McDonald, L. Prevost, and John Spencer.

Objects exhibited.—At the intermediate, on the 2d inst.—Strawberries, by John C. Engleman, Hovey's Seedling and Bourbon Pine; by Wm. Johns, Methven Scarlet; by Edwin Middleton, Seedlings originated by Dr. Wm. D. Brinkie; the Abyssinian Prince, a remarkably fine variety, of a dark rich color, and fine flavor; another quite prolific, the plant bearing 73 perfect berries; another fine plant bearing 53 berries; also, a dish of his "Higgin's Favorite," some berries of which measured 4½ inches in circumference. By J. B. Baxter, an unknown variety, which he received from "Maryland." By Anthony Felton, Methven Scarlet. By Andrew Patton, Hudson, and white variety, and a number of other kinds from various sources.

On the present occasion, Plants—by Wm. Chalmers, by Wm. Hall, by Archibald Henderson, fine collections. Indigenous—by A. Henderson, by Wm. Hobson, Garden Roses; by John Finlayson, Pinks; by James Bisset, Achimenes grandiflora picta, and a number of Bouquets.

Fruit—By James Bisset, from James Dundas's collection, very fine Grapes; by Andrew Patton, Cherries; by Wm. Hall, from Caleb Cope's collection, Fastolf Raspberries; by Dr. W. D. Brinkie, Seedling Raspberry, called the "Cushing."

Vegetables—By Anthony Felton, P. Gallagher, Andrew Patton, and Archibald Henderson.



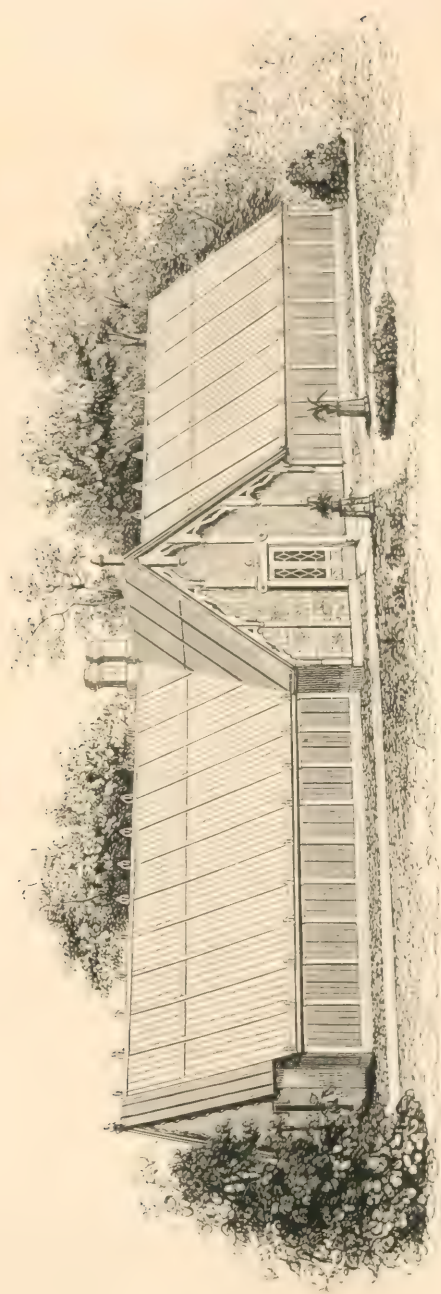
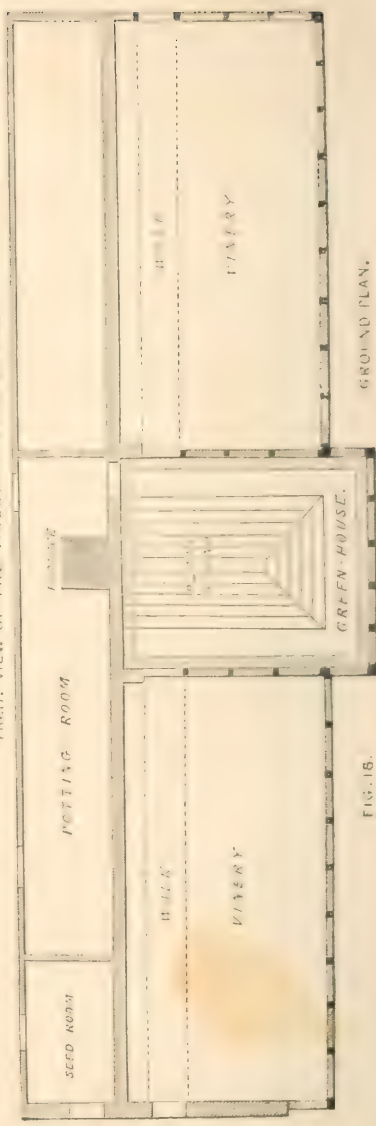


FIG. 17. VIEW OF THE Vinery AT BLITHEWOOD.



GROUND PLAN.

FIG. 18.

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No. 2.

THE NEW VINERY AT BLITHEWOOD, erected about eighteen months ago, we have had engraved as the frontispiece embellishment of the present number.

The glass structures in general use, both in this country and England, it must be candidly confessed, are rather ugly and unsightly objects. They have frequently either the common-place glazed-shed appearance of a market gardener's rude green-house, or the clumsy and heavy air imparted to them by some architect or builder, whose knowledge of the matter in hand, is, at the best, crude and imperfect.

The building of which we now present our readers a view, fig. 17, strikes us as a happy exception to these remarks. To much simplicity of detail and excellent arrangement for its purpose, it adds a chaste and becoming architectural character, which gives it an air of elegance and finish in every part worthy of a handsome country seat.

With regard to the exterior, we think the proportions excellent. The slope of the roof, about 40° , is one of the best for this climate. There is a particularly light yet firm and pleasing effect in the structure of the rafters,

and especially the upright glass in front. The chaste ornaments, which terminate the rafters at the eave and ridge lines, joined to the very tastefully decorated gables, strike us as producing a very elegant and harmonious effect—greatly superior to any thing of the kind that we have yet seen attempted.

The length of this vinery is about 100 feet. Every one familiar with long uniform ranges of glass, is aware of a stiffness and monotony of effect in the exterior, which is by no means agreeable. In the present case, this is entirely avoided by a projecting compartment in the centre of the range. This central compartment is used as a greenhouse for choice plants. In it is placed the principal door, and supposing this portion of the range, which is comparatively a small one, filled with summer blooming plants, such as the new Fuchsias, Gloxinias, Achimenes, &c., which are so gay and bright from May to December, we hardly know a more beautiful *vestibule* to a vinery range, filled with luxuriant and prolific grapes.*

We should remark here, that this range of glass is intended to be used as a *cold*

* Or to those who care little for a green-house, this compartment might be used for forcing an early crop of grapes.

clivary—that is, the grapes are to be grown without artificial heat. The perfection to which this mode of growing the Muscat of Alexandria, Black Hamburg, &c., was carried in the old vinery at Blithewood, so well satisfied its proprietor, that he erected the present house for the same general plan of culture. Our sun in this latitude is at all times bright and powerful enough to mature the foreign grape perfectly, with the simple aid of glass and the power which it gives us of controlling the changes of atmosphere, thus guarding against the too violent fluctuations to which we are often subject. The position of this vinery at Blithewood is remarkably good. It stands on the north boundary of the fruit garden, with a southern aspect, and is backed by a thick copse of wood; hence the rear of the building is never seen by the visitor, while the front appears to the best advantage. In a situation exposed on all sides, by doubling the rafters, forming a span roof, and pursuing the same general style, a very beautiful and perfect structure would be obtained, for any purpose.

The ground plan, fig. 18, we believe almost sufficiently explains itself. The height of the roof, and the clear width of the vinery

itself, are each about 15 feet. The width between the rafters, from centre to centre, is four feet. Underneath the stage in the green house, is a large cistern for the supply of the cold range with water. At the back of the range are a potting shed, and a fruit and seed room. The vines are planted in the usual mode—one beneath each rafter.

Most of our readers are already familiar, through the published views in our *Landscape Gardening*, with Blithewood, one of the most beautiful of American country seats, the residence of ROBERT DONALDSON, Esq., situated on the east bank of the Hudson, about 100 miles from New-York. The present structure bears the same marks of superior taste and refinement in landscape embellishment and building, that we have before so gladly admired and commended in this demesne.

Having given this as a specimen of a large and highly tasteful vinery, we hope soon, also, to lay before them, a view and plan of a structure for raising foreign grapes, constructed in the cheapest and simplest manner, and with a view not only to the closest economy in the building itself, but also in the care required in the culture of the grapes.

THE BLIGHT IN THE PEAR TREE.

THE orchard cultivation of the pear is rapidly becoming an important matter. The soil and climate of a large portion of the Union are, probably, as well suited to the growth of this fine fruit as those of any country whatever. As an instance of the present state of the market for pears, we may mention that, to our knowledge, a single grower and dealer, in this state, sold in New-York, in two years past, two thousand

dollars worth of pears, mostly of the White Doyenné (or *Virgalieu*). They were of the very finest quality, and brought nearly twelve dollars per barrel. The quantity is large to be offered by one person, but the price shows that pears of the finest quality are yet scarce in our markets. The fact indeed is this;—to those whose soil is favorable, the pear is the most profitable of all orchard trees.

There is only one drawback to the extensive cultivation of the pear tree—but this is an important one; we mean, of course, THE BLIGHT.

To see a fine healthy tree, apparently in the condition of the utmost vigor, suddenly—sometimes in a single day—turning black in its branches, and dying as if struck by lightning; this is indeed discouraging to the cultivator.

We have, in our work on Fruit Trees, given our views, at considerable length, on the nature of this disease, popularly known as the *fire blight*, or *fire blast*. We will only, therefore, here repeat, that there are two distinct maladies known by this name, and often confounded together. One is the *insect blight*; the other the *frozen-sap blight*.

The *insect blight* we do not consider a malady of a very serious nature. As it begins at the extremity of the tree, at or near the ends of the branches, and as its spreading depends entirely upon the care or carelessness of the cultivator, it is his own fault if it ever destroys *many* trees. Experience and observation have convinced us that the pruning knife, vigorously applied the moment the insect first commences his attack in June,* and faithfully persisted in, will soon rid one's garden or orchard of this minute but most poisonous *Scolytus*.

But the *frozen-sap blight* is quite another and a much more alarming disease. Some parts of the country are most severely visited by it; and where it is common, its effects are so disastrous, that unless some remedy can be offered, the extensive culture of this fine fruit must be abandoned there.

It is, to our own mind, thoroughly established, that this form of blight arises from the sudden freezing and thawing of the

sap vessels in winter. Just in proportion, therefore, as the system of a tree is filled with sap, or unelaborated juices, at the close of the growing season, such will be its liability to be affected by this form of blight. Hence, trees growing on dry and high ground, where the growth is completed early in summer, will usually entirely escape this form of blight; while those growing on low and moist soil, where vegetation continues to a late period, will always be more subject to it. Hence also, the comparative rarity of the frozen-sap blight in the drier and poorer soil of the Atlantic states, and its great prevalence in the deep deposits of vegetable matter which make up a large part of the best soils of the west.

If any one will carefully examine a tree affected by the frozen-sap blight, he will notice *spots* on the bark of the trunk or principal branches, which have a dead or withered appearance. The bark there is contracted, blackish, and is shrunk below the level of the surrounding healthy portions. This is often observable very early in the spring. As the season opens, the tree starts into leaf, and grows luxuriantly: suddenly, about the middle of June, sometimes a little earlier or later, a terminal shoot, a branch, or the whole tree, droops and dies.

If we pursue the examination a little further with the knife, we shall find the inner portion of the bark, next the wood—in short, that part where the downward current of sap takes its course—has assumed a blackish hue. This taint is not confined to that part of the tree, viz., the limb or branch where the *external* symptoms of the blight are shown, but extends, more or less rapidly, from that point through the whole of the rest of the tree, unless it is arrested by amputation in a very early stage.

The death of pear trees by this form of blight has been supposed to be a mecha-

* Speedily known by the appearance of the shoot, which turns black, leaf and branch, almost immediately. It should always be amputated a foot below where there are any marks of discoloration.

meal effect, similar to that caused by girdling or ringing a tree. This is, indeed, a sufficient explanation of some few cases; since it is undoubtedly true, that the effect of the frozen and dead spot of bark, when it extends quite round the tree, is exactly similar to girdling it, or removing the same quantity of bark altogether. The leaves would expand in the spring, because the upward current of sap would be carried on through the young layer of wood of the previous season. But when the current commences passing downward through the inner layer of bark, the tree must perish, because the channel of communication is cut off by the dead spot of bark. But supposing, in this case, this spot to be on one of the principal limbs, then *the mortality would be confined to the portion above this spot.*

But every one who has carefully watched the frozen-sap blight, very well knows that in these instances it is not confined to such branch. On the contrary, in most cases, if left to itself, it pervades the whole system of the tree, the vitality of which is destroyed. Sometimes its progress is so rapid that the whole seems affected in a few days; at others, it is so gradual, that it is a couple of years before the mortality is complete.

We have satisfied ourselves that this effect is generally owing to the sap, which is rendered poisonous to the tree by the action of frost.

1st. Because the malady is distinctly traced, in its early progress, by a discolouration of the inner bark alone. It is through this that the principal current of the sap is carried on. That portion of the sap vessels, ruptured and broken by sudden frost and thawing, is more or less filled with putrid decomposing vegetable matter. This matter is taken up by the upward current of sap, and disseminated through the branch

above it, the adjoining parts, or through the system of the tree.

If the diseased part is large, and the poisonous matter abundant, the tree will die almost immediately on the commencement of vegetation. But this is rarely the case. The first upward current of the sap in the spring, is so watery and abundant that it would require to be very largely infected to cause immediate death. In a few weeks, however, as soon as the leaves have grown large enough properly to elaborate the juices, and the current of digested food sets downward through the system of the tree, the effect of the poison begins to show itself. If the diseased spot is upon a branch, and is small in extent, its effect will probably be confined to the destruction of that portion. If the portion is larger, but the diseased matter, or putrid sap, small in quantity, it may only cause a general decline of health in the tree. But when it is much extended, and is once fairly taken up and distributed throughout the system of the tree, nothing will save it. If it does not all die the first season, it will the second, or even, as we have repeatedly observed, two or three years afterwards. When we can see, on raising the inner bark, that it is discoloured, then we may be sure the poison has already traversed the sap vessels, and the fate of such portion of the tree is sealed, however flourishing it may yet appear in the outer bark or the leaf.

2d. Because the symptoms of the frozen-sap blight are almost entirely similar to those which are produced by inoculating the system of a tree in early spring with a small quantity of arsenic, or any other powerful agent destructive to vegetable life. If a little arsenic is introduced into the circulation of a fruit tree at that season, it first discolours the sap vessels of the inner bark; then the leaves suddenly flag and droop;

the branch shrivels and turns black ; and finally, if the dose is large enough, the whole tree dies.

That the sap of trees is often wholly changed in its nature by the cold, any one who examined the state of the peach and many other fruit trees, in the spring of 1836, after the extraordinary and unparallelled winter of 1835, will easily understand. Thousands of trees, always hardy before, were destroyed outright by the excessive cold of that winter. In all cases, the sap vessels were more or less distended or burst ; the matter contained in them became glutinous, dark coloured, and, in some cases, offensive to the smell. Nearly all the trees which presented this appearance during the spring, died before the autumn of the same year.

What we call the frozen-sap blight, is not confined to the pear tree alone. We have seen it in several other trees not entirely hardy in this latitude, or which suffer from winters of unusual severity. Such are the Ailanthus, the Catalpa, and the Spanish Chestnut. The latter tree, especially, shows very frequently, while standing in the nurseries and still young, the same symptoms as the blighted pear tree. First, early in the spring, patches of shrivelled and discoloured bark near the lower part of the trunk ; second, about the beginning of summer, sudden withering of the foliage, death of the branches, and often of the whole tree.

A most important question, which we now reach, is this : Are these diseased spots, where the malady first arises, and from whence it is disseminated, the immediate effect of the freezing, or the thawing ?

We think we are prepared to answer this question. The fact that these spots, when they occur on the trunk or larger branches, almost invariably appear on the southern side, proves clearly that it is the

too rapid *thawing* caused by the sun's rays, which bursts the sap vessels, and is the immediate cause of the alteration in the matter deposited in them. Were it the effect of the frost simply, the evidences would appear equally on all sides of the trunk.

Again, it is well known to all who have the care of half-hardy trees or plants, that if shielded from the direct action of the sun's rays, either by a mere *shading* of boards, or by placing them in a northern exposure, they do not suffer in the least, even by a temperature much colder than that which destroys the same trees when planted in a sunny southern exposure. A plant, in other words, will bear, without injury, a very severe frost, if it is not, directly afterwards, exposed to a sudden thawing.

Now the pear tree appears, so far as regards its bark, to be the most tender of our fruit trees. Our climate in winter is often one of the most sudden and extreme variability. To-night we have the thermometer at zero of Fahrenheit ; the next morning we have a bright unclouded sun, that shines on any dark object exposed to it, with all the warmth of April. The consequence to a susceptible tree is obvious. Any part which happens to be especially exposed, either from its position, as upon the southern side of the trunk, or from the circumstance of the lodgment of any unusual deposit of juices therein, is of course most likely to suffer from the sudden and powerful effects of the sun immediately after severe frost. Here, accordingly, we soon find the sap vessels burst, the bark shrivelled, and the poisoned matter accumulated, which is the source of the blight of the ensuing spring and summer.

What is the remedy for the frozen-sap blight ?

For the blight in its milder forms, as we

have already said, vigorous pruning is often sufficient to arrest its farther progress. When it has thoroughly passed into the system of the tree, there is no known remedy. But perhaps a still more important question to the orchard grower of pears is this: Is there no certain preventive to this most destructive form of blight, for those soils and situations most exposed to it?

It is with a view of suggesting such a remedy, that we have called attention to the subject, at the present time. We propose to prevent the frozen-sap blight entirely, *by whitewashing the stems and principal branches of all valuable pear trees every autumn, after the leaves have fallen.* By this simple operation, we think the injurious action of the sun will be entirely prevented; its rays will be, for the most part, reflected, and the rapid thawing of any large part of the bark rendered entirely impossible.*

It may seem to some persons that it would be a tedious and troublesome process to whitewash the trunks and larger branches of all the pear trees in a large garden or orchard, every season, just before winter. We have only to answer to such an objection, that the loss of one valuable tree, in a full bearing state, is a far more serious matter than the cost of whitewashing a good sized orchard, for half-a-dozen years. An active man, with a large brush, a light

step-ladder, and a little practice, will brush over a good many trees in a day. Where this blight does not appear, it will not be necessary. In districts where it is common, if this should prove effectual, we are sure it will be gladly resorted to.

We have, ourselves, no great admiration for whitewashed trees. They are rather unpleasing and unnatural looking objects, at the best. But if we can drive from our gardens and orchards this *monster* malady of the pear, by virtue of a lime coat, we will be content to shut our eyes to all but the *economical* view of the subject.

Our readers will, we trust, consider our preventive as one which we suggest for extensive trial, and not one which we give as having borne the test of long experience. We have been induced to give more than usual examination of late, to this subject, by having our attention called this season to two most promising young pear orchards, both just coming into a bearing state, and both suffering greatly from this alarming disease. These thrifty young specimens, bearing infected spots on the south sides of their trunks, began to droop at the ends of the branches, early in June, and now are only melancholy looking objects—dead almost down to the root.

We have pointed out what seems to us the most rational theory of this fatal form of blight. Our proposed preventive will be thoroughly tested in these two orchards affected by it during this coming winter, and we beg our correspondents also to give it a fair trial in various parts of the country, and let us know the result. This or any other remedy, which may prove successful, will not only save large orchards already planted, but will induce the planting of thousands of pear trees in sections where orchardists are only prevented from extensive planting by the frozen-sap blight.

* We presume all our readers are familiar with the effect of the solar rays upon bodies of different colours, exposed to the sunshine in winter. But it may not be amiss to repeat here Dr. Franklin's experiment:

"On a winter's day when the ground is covered with snow, take four pieces of woollen cloth, of equal dimensions, but of different colours, black, blue, brown and white, and lay them on the surface of the snow, in the immediate neighborhood of each other. In a few hours, the black cloth will have sunk considerably below the surface; the blue almost as much; the brown evidently less; and the white will remain precisely in its former situation."

To the above we also add the following:—"Dr. Watson, the present Bishop of Landaff, covered the bulb of a thermometer with a black coating of Indian Ink, and the thermometer presently rose 10°."—*Greg. Dic. Arts and Sciences.*



THE FASTOLFF RASPBERRY.

THE Fastolff Raspberry, we are gratified to be able to say, now that it has borne two years in this country, is worthy of all the praise that has been lavished upon it. It is large, handsome, prolific, and of most excellent flavor.

This new English variety was first brought into notice in December, 1842, by the Messrs. Youell, of Great Yarmouth, Norfolk, England. It is stated by them to have been known and cultivated in the neighborhood of Yarmouth, near an ancient pile called *Fastolff Castle*, for several

years previously. It is evidently a large and improved variety of the true Dutch Red Antwerp, and it received its name from the old castle near which it was at first well known.

The Fastolff Raspberry has been the prize fruit at all the leading horticultural shows in England since it has been introduced into cultivation there. There is no doubt of its bearing off the palm in the same manner in the soil and climate of the United States. It seems stronger and rather hardier than the large Red Antwerp, which it most nearly

resembles, and its fruit is larger and higher flavored than that of the Franconia. Both these varieties will, however, hold their place in our gardens, because they are sorts of great merit; but we are inclined to give the Fastloff the first rank for large size and productiveness.

The fruit, as will be seen by the preceding drawing, is much more roundish, or *obtusely* conical, than that of the true Red Antwerp. The canes are also stouter, more upright, and the leaves rather longer and more pointed. It has the excellent habit of ripening its berries in long continued succession. Its cultivation is of the easiest kind, as it grows in any good garden soil. To raise

the largest fruit, however, and to secure a supply for several weeks, the ground should be trenched and manured two feet deep before planting it. April is probably the *best* time for transplanting it in this latitude; though October and November are favorable months.

The Fastloff Raspberry ripens about the same time as the large Antwerp. With us it was in perfection this season about the fourth of July. Its luxuriant habit, large size and good flavor will soon make it widely known in our gardens, as it is undoubtedly the greatest acquisition of the last twenty years to this class of midsummer fruits.

SUMMER PRUNING THE GRAPE VINE.

ALMOST every one having a garden, cultivates a grape vine. If he cannot grow a Black Hamburg or Muscat of Alexandria, under glass, in such a way that a single cluster will weigh five pounds, he can at least raise that hardy and prolific native sort, the Isabella, in such abundance that a single root will give him every year fifty pounds of fruit.

This is the month when that which is commonly known as the summer pruning of the grape vine takes place, all over the country. (We confine our remarks now chiefly to hardy grapes.) The native grapes are very luxuriant growers; they make every season of life to themselves a great mass of foliage; and the almost universal practice is to cut off, when the grapes are about the size of peas, every shoot, two or three joints beyond the outermost bunch of grapes.

This is done under the impression, first, that to leave so much young wood and foliage

is to rob the growing fruit of its fair supply of food; and second, that every bunch should be well exposed to the sun, in order to assist it in coming to full maturity. We ourselves practised this mode of summer pruning for several years, even after we had doubts of its propriety, and were frequently disposed to lay to its charge the diminished size of the grapes, of which we are now confident it was the cause.

In 1843, our attention was attracted by an article from the able pen of Dr. LINDLEY, on this subject. It began with the following propositions:—

“(1.) If all the leaves which a tree will naturally form, are exposed to favorable influences, and receive the light of a brilliant sun, all the fruit which such a plant may produce will ripen perfectly in a summer that is long enough.

“(2.) If all the leaves of a tree are exposed to such influences, all its fruit will advance as far towards ripening as the length of the

summer will admit of ; it may be sour and colourless, but that condition will be perfect of its kind.

“(3.) But if all the fruit which a healthy tree will show is allowed to set, and a large part of the leaves is abstracted, such fruit, be the summer what it may, will never ripen.

“(4.) Therefore, if a necessity exists for taking off a part of the leaves of a tree, a part of its fruit should also be destroyed.

“(5.) But although a tree may be able to ripen all the fruit which it shows, yet such fruit will neither be so large nor so sweet, under equal circumstances, as if a part of it is removed ; because a tree only forms a certain amount of secretions, and if those secretions are divided among twenty fruits instead of ten, each fruit will in the former case have but half the amount of nutrition which it would have received in the latter case.

“(6.) The period of ripening in fruit will be accelerated by an abundant foliage, and retarded by a scanty foliage.”

Dr. LINDLEY stated, that he considered these propositions as the expression of general truths, applicable to all cases, but especially to the vine. If they were founded, as he believed, in well ascertained laws, then the rigorous summer pruning of the vine is totally wrong. He recommended, on the contrary, that not only should the whole crop of leaves be unpruned, but that the lateral shoots, always hitherto removed, should be allowed to remain ; because “all those laterals, if allowed to grow, would by the end of the season have contributed somewhat to the matter stored in the stem for the nutrition of the fruit ; because the preparation of such matter would have been much more rapid ; and because the ripening of the fruit, which depends on the presence of such matter,

would have been in proportion to the rapidity of its formation.”

“It is a mistake,” continues he, “to imagine that the sun must shine on the bunches of grapes in order to ripen them. Nature intended no such thing, when heavy clusters were caused to grow on slender stalks, and to hang below the foliage of branches, attached to trees by their strong and numerous tendrils. On the contrary, it is evident that vines naturally bear their fruit in such a way as to screen it from the sun ; and man is most unwise when he rashly interferes with this intention. What is wanted is the full exposure of the *leaves* to the sun ; they will prepare the nutriment of the grape—they will feed it, and nurse it, and eventually rear it up into succulence and lusciousness.”

Struck at that time with the soundness and the force of this reasoning, we immediately put in practice the suggestions it contained. We abandoned, for the most part, summer pruning on our vines, and recommended it verbally to many others. The result of three years' trial has fully convinced us, and we believe all others who have tested it, of the entire superiority of the grapes, both as regards maturity and the weight of the crop, in all cases where the common and severe system of summer pruning is abandoned.

All that we find it necessary to do now, with grapes in the open air, is, at the beginning of July, to go over them and tie up to the trellis or frame, all rambling shoots. If, from any neglect at the season of winter pruning, or when the buds were thinned in May, too many young shoots have been suffered to grow, a few of them may be cut out, close down to the point where they start, taking off the whole branch—fruit and leaves. The remaining branches and leaves will then be able to provide

nutriment for themselves. It should, however, be remarked, that if the winter pruning and the spring disbudding have been properly done, no summer pruning whatever will be necessary.

"But," says some person accustomed to cutting off half a cart-load of foliage from his hardy vines every July, "what am I to do with the mass of foliage, running into a wild wilderness, that I find upon my vines every midsummer. It would smother the grapes."

We answer, provide against it by pruning back the side spurs or shoots, close to the leading canes, every winter. And in the spring, when several buds start out from the same place to make the current season's wood, rub off all but *two*. In this way you will prevent the vine from producing too much wood, or more fruit than it can properly carry; and you will also allow the shoots that form the current year's growth, to produce and retain all the foliage which it is possible for them to do, in order that the grapes which they bear may have the utmost supply of nutriment.

We cannot better conclude these remarks than by the following paragraph from Dr. LINDLEY's article. It relates to *autumn*

pruning, and is as much to the point here as in England:

"When, however, the branches have grown for many weeks, and are in the autumn beginning to slacken in their power of lengthening, theory says it is then right to stop the shoots by pinching off their ends, because after that season newly formed leaves have little time to do more than organize themselves, which must take place at the expense of matter forming in the other leaves. *Autumn-stopping* of the vine shoots is therefore not only unobjectionable, but advantageous; for the leaves which remain after that operation will then direct all their energy to the perfection of the grapes."

We have elsewhere stated, that we consider the simple *upright trellis* in every respect preferable to the *arbor*, for training hardy grapes. Too much sun we have never known, even in our hottest seasons, for the grape; and the leaves are so much more perfectly exposed to the sun on the trellis, where it can reach them on both sides, than upon the arbor where it can only touch upon one side, that the crop of grapes in the former case is always, other circumstances being equal, incomparably larger and finer.

ON THE CULTIVATION OF THE LILY TRIBE.

BY JOSEPH BRECK OF BOSTON.

As the proper time for transplanting the Lily family is near at hand, it may not be out of season to offer a few remarks in relation to the various species and their cultivation.

All the species of this splendid genus with which we are acquainted, may be considered worthy of a place in every good collection of plants.

Some of the species are well known, while others are rarely seen in our gardens.

The Lily is interesting to the young student in botany as well as to the florist, on account of the simplicity of its structure, and the magnitude and distinct character of its different parts and organs. In the Linnæan system it is found in class *Hexandria*, order *Monogynia*. It is the type

of a most interesting order in the natural system of Jussieu, (the *Lilaceæ*), embracing many plants with flowers truly magnificent.

The root of the Lily, or what is generally denominated the root, is a scaly bulb, the scales being laid over each other in an imbricate form, enclosing the germ or bud. The bulb is not a root strictly speaking, but a bud containing the embryo of the future plant. The roots are thrown out from the bottom of these bulbs or buds, and unlike the fibres of the tulip bulb, are perennial, and on their strength depends, in a great measure, the vigor of the future plant. During the process of the growth and inflorescence of the plant, new buds are formed side by side of the old bulb, which are matured sufficiently to push their leaves soon after the flowering of the mother plant is over, and it begins to exhibit signs of decay in its foliage. This is the proper time to divide and transplant the bulbs. The different species of Lilies will all be ready to take up in the month of August; some earlier, and others later, according to their time of flowering.

In the cultivation of border flowers generally, it will be found that they thrive best in well pulverized rich soils, such as are neither too heavy nor too light. The Lily will do well in any well prepared border. By a well prepared border, we mean one that has been trenched, and bountifully supplied with decomposed stable or barnyard manure, composted with peat or swamp-muck. If the soil was of a heavy character, a suitable quantity of sand should be mixed with it, or if too porous and light, soil of an opposite quality ought to be incorporated with it. Ground thus prepared is in order to receive not only Lilies, but other bulbous roots and plants. On no account should the removal of lilies be deferred until the leaves begin to push, for in that

case the bulbs are very much weakened, and their flowering may be prevented for a number of years. Care should be taken not to break the fibres attached to the bulbs.

The bulbs of strong growing Lilies should be planted from four to five inches deep, and weaker sorts from three to four inches. It will be found beneficial to imbed the bulb in sand. In the borders, three bulbs of the stronger growing varieties, are enough for one group, and five of the weaker sorts. They have a pleasing effect when planted in masses. Most of the species are perfectly hardy, and it is not absolutely necessary to give them any protection in winter; but all will bloom more strongly, provided they receive a covering of litter or rotten manure.

LILIUM CANDIDUM, The Old White Lily. This species has always been considered the emblem of whiteness, and is too well known to require any description. A mass of white lilies is always beheld with admiration, and they perfume the air with their delicious fragrance. The White Garden Lily cannot, therefore, be dispensed with by the lover of flowers. In strong ground, it grows three or four feet high, and is in flower about the first of July.

LILIUM CANDIDUM, FLORE PLENO. This is a double variety of the white: but no one will cultivate it for its beauty. The inflorescence appears to be a continuation of the foliage, which as it terminates the stem, gradually assumes the character of sepals or petals, with the whiteness of the simple flower. It is a curious monster, and for that reason may be fancied by some.

LILIUM CANDIDUM FLORE STRIATO, the Variegated White Lily, is another variety of the common white. The purity of the white is destroyed by the dull purple stripes that mark the petals, and give the impression that the flower has been soiled.

LILIUM CANDIDUM, FOLIA VARIEGATA. There are two varieties of White Lilies with striped leaves, one having gold, the other silver striped foliage; both pretty in a collection.



Fig. 19. *The Long-flowered White Lily.*

LILIUM LONGIFLORUM, or Long-flowered White Lily; sometimes called *L. Japonicum*. This is a beautiful species, and although it has the reputation of being rather tender, requiring the protection of a frame, stood uninjured in the open ground the past winter, without any other covering than a little sea-weed. The flowers pure white and very large; corolla tubular, campanulate; leaves scattered, lanceolate; stem smooth; height, 2 feet. Flowers in July.

LILIUM MARTAGON, Turk's Cap Lily. Of this species of Lily there are a number of varieties, as white, purple, spotted—all desirable and beautiful. The petals are very much reflexed; corolla revolute; leaves whorled, ovate-lanceolate. In strong soil, where the roots were well established, we have seen this variety throw up stems three to four feet high, each stem producing 20 or 30 flowers.

LILIUM UMBELLATUM, the Umbel-flowered Orange Lily. A strong growing species,

producing quite a number of large upright orange flowers, with rough interior; leaves scattered. In contrast with the white lily, it makes an imposing appearance. It commences flowering about one week earlier than the white.

LILIUM AURANTICUM, Dwarf Orange Lily. Flowers upright, rough inside, 2 or 3 only found on one stem, which grows to the height of two feet. Leaves lanceolate. A very pretty variety.

LILIUM TIGRINUM, Tiger Spotted Lily. A very strong growing common variety, but very showy, with fine reflexed orange flowers with black spots. Corolla revolute, papillose inside (covered with fleshy points or protuberances). Leaves scattered, sessile, 5-nerved, the upper cordate-nervate. It has the peculiarity of producing bulbs in the axil of the leaves. Grows from 4 to 6 feet high. Having the faculty of producing not only from off-sets, but from the small bulbs, it makes itself too common. It is a suitable plant for the shrubbery as well as the border.

LILIUM POMPONICUM, Scarlet Pomponé Lily. This is a beautiful variety, with scarlet reflexed flowers: corolla revolute, toothed and warted inside, leaves scattered, linear-subulate; two feet high. Flowers in June and July.

LILIUM CHALCEDONICUM, Scarlet Martagon Lily. This is another fine scarlet lily with reflexed flowers, growing to the height of 3 or 4 feet, and flowering in July and August. Leaves linear-lanceolate, scattered; corolla revolute, dotted inside.

All our native lilies are beautiful, and very much improved by cultivation. While we are bringing together from the ends of the earth the treasures of Flora, let not our own be neglected.

LILIUM SUPERBUM, Superb Lily. One of the most magnificent of our native plants.

Not found we believe in the vicinity of the city, or rarely in this state. We have seen it in New-York, and farther south. Stem erect, straight, from three to six feet high, bearing a large pyramid of orange coloured flowers, amounting, not unfrequently, to thirty or forty in number. Leaves lance-linear, three-nerved, glabrous; lower ones whorled; upper ones scattered; flowers in a pyramidal raceme; corollas reflexed. There appears to be a variety in the colours from a yellow to an orange scarlet.

LILIUM CANADENSE, *Nodding Meadow Lily*. The character of this lily when cultivated, is very much improved, and when in rich ground approaches the character of *L. superbum*. The colours vary: varieties may be found from light yellow to orange, and nearly to a scarlet. A great portion of our meadows are embellished with this flower in the month of June. Stem green, varying in height from one to three feet, with lanceolate leaves surrounding it in distant whorls; flowers from one to three or even more, on terminal peduncles; corolla nodding, bell-shaped, spotted inside; petals lanceolate, turned outward, but hardly reflexed. In the garden we have seen this lily growing four or five feet in height, graced with at least twenty of its beautiful pendulous flowers.

LILIUM PHILADELPHICUM, *Common Red Lily* of our pastures and dry fields. Of equal beauty with the *canadense*, but of different habit. Its height rarely exceeds two feet; leaves whorled, a few sometimes scattered. Flowers, one, two or three, supported on a long claw, upright, of a dark vermilion colour, spotted; corolla bell-shaped. The character of this species will no doubt be as much improved as *canadense*, by cultivation. It will then form one of the most showy ornaments of the garden, as the colour of the flowers is rich

and brilliant. If ten or fifteen can be produced on one stem, the effect of a group of plants will be surpassingly rich.

We have succeeded in transferring our indigenous lilies from the fields or meadows when in flower, by taking up a ball of earth with the roots.

Among other beautiful species and varieties in this interesting order, are *L. catesbaei*, a native of the south, with orange coloured flowers, and dwarf in its habits; *L. carolinianum* from Carolina, somewhat like *superbum*; *L. pyrenaicum*, with reflexed dark orange flowers, from the Pyrenees; *L. monadelphum*, a species of martagon from the Caucasus; *L. croceum*, *pumilum*, and many others, which may be obtained from the Dutch florists. Lily bulbs, when transported across the Atlantic, will hardly flower the first year, even when conveyed in the best condition. more than one-half usually perish when packed in the best order. These bulbs should be planted as soon after taking up as possible.

In addition to the varieties described, some splendid species or varieties have been recently introduced from Japan, which are to be found in a number of collections in this vicinity, viz., *Lilium speciosum* and *lancifolium-album*. We are indebted to Dr. Van Siebolt for this magnificent acquisition, who brought them from Japan to Europe. These bulbs have commanded an extravagant price. But one individual, to our knowledge, has tried them in the open ground in this neighborhood; we understand they stood the winter with some little protection. Should they prove hardy upon further trial, they will be eagerly sought after, as they surpass in beauty and fragrance every other species or variety in this extensive family of plants. *L. speciosum* has a pink and white frosted ground, finely spotted with a deep crimson; *L. lancifolium*-

album is a pure white: each variety with reflexed petals. Hybrids have been produced between these species, and a number of new varieties have been obtained, all exquisitely beautiful. We have seen specimens, four or five feet high, with over twenty buds and flowers.

I have thus given a faint description of most of the Lily family that have come under my observation. They are all beautiful, easy of cultivation, and will give much satisfaction to the florist when well managed.

JOSEPH BRECK.

Boston, June 30, 1846.

NEW MODE OF RIPENING FOREIGN GRAPES.

DEAR SIR—I send you an engraving of a novel kind of bell-glass, much used in Holland for ripening the finer sorts of grapes in the open air. The following account of it may also interest your readers, for which I am indebted to the *Horticultural Review* of Paris.

This bell-glass has an opening at the top, with its edge turned over in the form of a collar. After it is slipped over the bunch of grapes, it is held in its place by a wire, which is passed round the collar, and then fixed to the nearest part of the trellis or vine branch. The cluster is usually introduced into the bell-glass as soon as the grapes are well formed, though it is often delayed as long as possible; that is, till the bunch is in danger of growing so large, that it will not enter the opening in the upper end of the bell.

Long experience, it is said, has thoroughly proved the good effect of this kind of bell-glass in the climate of Holland. There, one often sees an hundred, and not unfrequently several hundreds, in use at once, on the same line of grape espalier. In them, grapes, which will not ripen at all in the open air, mature and attain an excellent flavor.

The air, it will be seen, circulates freely through these bell-glasses, as the openings at both ends are left open. Insects of all



Fig. 20. *The Dutch Bell-glass.*

kinds, it is stated, will not remain under these bell-glasses, and the grapes enclosed in them are consequently left entirely untouched by the numerous flies and wasps, which usually prey upon them when exposed. No sooner does a wasp approach the enclosed bunch of grapes, than he takes flight again, probably alarmed at the

noise made by his own wings under the glass.

Such is the account received from Holland, of this mode of ripening grapes. I understand that these bell-glasses can be blown at our glass-works, and afforded at low prices by the dozen. Their value will no doubt be tested by some of our amateur

cultivators, who would like a couple of dozen clusters of choice Frontignan or Hamburgh grapes every year, without the expense of a vineyard. VITIS.

P. S. I ought to add the dimensions of the Dutch bell-glass. Its height is about nine inches; the opening at the bottom six inches; that at the top two inches.

New Mode of Growing Early Sea Kale and Rhubarb.

BY R. W. T., OF PHILADELPHIA.

SIR—I have a mode of raising an early crop of Rhubarb and Sea Kale, which gives me these two vegetables a fortnight earlier than my neighbors, and which I will, with your permission, lay before your readers.

About five years ago my workmen were engaged in draining a large piece of low bog meadow. When the ditches were made, a goodly quantity of fine mellow black peat, was thrown out. I had this carted into my kitchen garden. A couple of dozen loads, which were not used in the autumn, were allowed to lie all winter. In the spring, very early, I found to my surprise, that a pretty thick coat of the black earth had by accident, been left on one end of a bed of Sea Kale.

It was at least a fortnight before the usual season for cutting either this vegetable or Asparagus. But already I beheld fine strong shoots of the Sea Kale, pushing their heads above the dark surface of the peat. Indeed, I was then able, from three or four hills, to cut as fine a dish of this vegetable as I ever tasted. It was very finely blanched, and remarkably tender and fine flavored. The roots in that portion of the bed, alongside, that had not been covered by the black earth, did not begin to grow till many days afterwards.

You may easily suppose that I took advantage of this excellent, though accidental, hint. The November following, I covered my whole bed of Sea Kale fourteen inches deep with the peat earth. I was able to commence cutting the shoots, for boiling, the next spring, long before my neighbors; and the size and flavor were certainly all I could desire. I had been in the habit, like most of those persons who raise this esculent, of heaping up a mound of sand every spring, over each hill of Sea Kale. I have now altogether abandoned that way of blanching the stalks. I find the peat a far superior substance for this purpose. Its dark color draws the heat of the sun, and retains it, thus forwarding the growth of the shoots much more than the sand, which has not this quality. I think also, that the heavy coat of peat laid over the bed in autumn, keeps the frost pretty well out of the ground below it, so that the roots are in a fit state to be excited into growth by the first bright weather in March.

Since I have found the value of the peat earth for raising early blanched Sea Kale, I have also tried it with Rhubarb. Upon this vegetable it acts equally well. I cover the crowns of Rhubarb, in the fall, about 18 inches deep, with the black peat soil, heap-

ing it up in the shape of a flattened cone or hill. From such hills I am able to cut nice blanched stalks in abundance, at least twelve or fourteen days before the roots in the open quarters afford me any stalks. Those who like a fine early tart, will not think this too much trouble to obtain it.

I should also mention, perhaps, that as soon as the season for cutting those plants is past, I draw away all the covering of peat, mix it with my compost heap, or apply it to any part of the garden in need of it. The beds are then dressed and dug as usual, and the plants left to make their summer's growth. I generally dig in a dressing of manure in the autumn, before I cover the beds with the peat.

If your readers will make a trial of this way of raising very fine early Kale and Rhubarb, I am sure it will meet with their approbation.

R. W. T.

REMARKS.—We commend this article to the attention of every one having a kitchen garden.

We will only add to the excellent directions for raising early Sea Kale, our surprise that this really delicious and invaluable vegetable is seen in so few gardens in the United States. It is not in the least inferior to Asparagus, to our taste, and it is served to the table much in the same way. Coming at the same time, among the very first of spring vegetables, it is doubly welcome from the scarcity of almost all esculents at that time.

Nothing can be easier than the cultivation of Sea Kale. Any common garden soil that will yield a cabbage, will produce it; once planted, it gives a regular supply for the table every spring, and ought therefore to have a place even in every cottage garden.

The seeds of the Sea Kale may be sown in October or April. Dig the ground thoroughly, and sow them about an inch deep, and at such a distance as to leave two or three roots in a place; the drills about 16 or 18 inches apart.—Ed.

DESIGN FOR A RUSTIC GATE.

BY RUSTICUS.

DEAR SIR—I send you a little sketch of a rustic gate which I have erected this season, and which, though very simple, has been a good deal admired by those who have seen it.

The roof, or canopy over it, is, as I have ascertained in a previous case, a most useful addition, since by guarding the gate itself to a considerable degree from the storms, it prevents it from getting out of repair.

This gate stands at an angle in the boundary lines, at the entrance to a little wood. Its rustic and sylvan character agrees well with the situation in which it stands.

Indeed, rustic work of all kinds is extremely pleasing in any situation where there is any thing like a wild or natural character; or even where there is a simple and rustic character. In the immediate proximity of a highly finished villa, it strikes me that rustic work, such as arbors, fences, flower baskets and the like, are rather out of place. The sculptured vase of marble, or terra cotta, would appear to be the most in keeping with an elegant place of the first class; that is to say, for all situations very near the house. In wooded walks, or secluded spots, rustic work looks well always.

It seems to me that the danger is, that

rustic work, like every thing else, gets into fashion, and then the whole good taste of the country grows mad about it. All sorts of foolish and ridiculous extravagances are indulged in it. One of my neighbors is a victim to this mania at the present moment. His gardener has made him a rustic basket in the form of a game cock, and planted its head with scarlet verbenas, and its tail with purple petunias: and the employer, who has not a very severe taste, shows it to all his visitors as something worthy of universal admiration! There are very few places that I have ever seen, that would bear even a little of this sort of grotesqueness. Any place, however fine, would be ruined in effect by much of it.

Rustic work is very perishable, if it is made of little bits of rough branches of any



Fig. 22. Design for a Rustic Gate.

kind that are picked up in the forest after the wood-chopper. On the other hand, if it is always made of the branches of the common Red Cedar, so abundant in most parts of the country, it will last a long while, and prove both strong and serviceable.

RUSTICUS.

THE CARNATION, ITS HISTORY AND CULTURE.

BY AN AMATEUR FLORIST.

I. ITS HISTORY.

I TRUST you are an admirer of my favorite flower the CARNATION. Not because you are bound, *by virtue of office*, to patronize all Flora's favorites, but that it is really and *per se* worthy of universal admiration. What, indeed, is more beautiful, or more fragrant than a collection of the finest varieties, comprising all gay and beautiful hues, and all the odorous richness that belongs to the spice groves of the East.

Dianthus (δῖος ἀνθος of the original Greek) signifies, literally, *Jove's Flower*, or the *Divine Flower*. This name, bestowed on the

genus to which the Carnation belongs, may be taken as a proof of the favor in which it was held a long time ago. How the popular name *Carnation* came to be bestowed, the floral historiographers have not told us. Perhaps it was given in allusion to the peculiar flesh-coloured hue of some of the plainer sorts—likely enough to have been the first kinds known; *caro*, *carnis*, being the Latin term for flesh. Indeed Steevens says, that so long ago as before the time of Shakespeare, *Carnardine* was the familiar name of the flower. I find it thus used in an old play of that era:

"Gograms, sattins, velvet fine,
The rosy coloured carnardine."

Drayton, the poet, indeed, also gives me warrant for this interpretation :

"The brave carnation, then with sweet and
sovereign power,
So of his colour called, although a July flower."

I like to look into the primitive history of my garden favorites. It is more agreeable than searching genealogical trees and tables of ancestry ; for the flowers go on improving every generation, while the descendants of great men often grow "small by degrees, and beautifully less."

The English and the Dutch have always had quite an enthusiastic passion for my favorite flower. You remember, no doubt, what that most delightful old essayist, the Spectator, thinks it necessary to say :

"Some professed florists make them their constant study and employment, and *despise all fruit ; and now and then a few fanciful people spend all their time in the cultivation of a single tulip or a carnation.*"

I am afraid this last sentence conveys an idea of a devotion far greater than even my own.

The Carnation has been the favorite, however, of more celebrated personages than the "professed florists." The illustrious Condé, great as a general and as a prince, while he was a state prisoner in the gloomy Bastile, amused himself in cultivating this charming plant. Indeed a French poetess, Mademoiselle de Scuderi, has commemorated the fact in one of her verses :

"En voyant ces Œillets, qu'un illustré guerrier
Cultive d'une main qui gagné des batailles,
Souviens-toi qu' Apollon a bâti des murailles,
Et ne t'étonne plus que Mars soit jardinier."

The Carnation is said to be a native of middle Europe. It is quite doubtful if the ancients knew it at all, as there is no allusion to it in any of the classics. But it has

been, for a great length of time, a favorite with all Germany and the north of Europe.

That good old botanist and herbalist, Gerard, first introduced it into England in 1597. He quaintly tells, that in his time it was in great esteem "to deck up the bosoms of the beautiful, and to make garlands and crowns for pleasure."

Since Gerard's day, the Anglo-Saxons have by no means neglected the Carnation. Within the last fifty years, some of the leading English flower fanciers have enumerated 300 or 400 sorts in their catalogues. The perfection to which their culture is carried, quite astonishes one. Indeed they are most tenderly nursed. They are always kept in pots full of the most carefully ordered composts ; they are closely watched at all times, but especially when approaching the blooming season. Then the buds are thinned out as soon as they are well formed ; the flower-stems are supported by neat and slender green stakes ; the opening blossoms are prevented from turning awry by pieces of card placed beneath them ; and at length, the expected time having arrived, the whole collection is placed under a tasteful awning upon stages, the plants rising one above another to show all of them to the best advantage. It is quite impossible to imagine anything finer than the "gay confusion" that meets the eye when such a display is in its perfection.

II. ITS CHARACTER.

THE Carnation, in its most perfect state, is known to florists in three principal forms, viz., the *Flake*, the *Bizarre*, and the *Picotee*.

The *Flake* is distinguished by being striped, with pretty regular well marked bands or stripes of two colours only on a white ground. (Fig. 23.)

The *Bizarre* (from the French *bizarre*, odd, irregular) is characterized by having

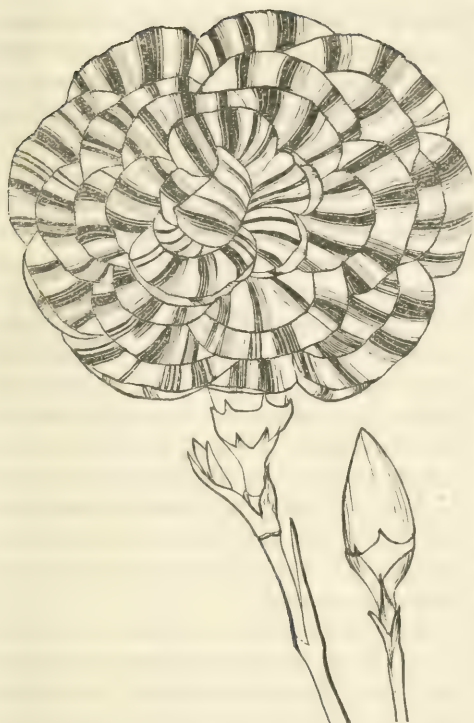


Fig. 23. *The Flake Carnation.*

irregular stripes of three colours on a plain ground. (Fig. 24.)

The *Picotee* (from the French *piquetée*, pricked or spotted,) differs entirely from the foregoing. They are usually bordered with a narrow *margin* of some dark colour, or are dotted with a great number of minute spots. The flowers are usually smaller, and the plants much hardier than the *Flakes* and *Bizarres*. The edges of the flowers in *Picotees* are generally serrated or cut, though in the finest specimens they are often nearly even. This class affords the greatest variety of colour, both in the ground and the spots or pencillings,—yellow, purple, lilac, white, crimson, &c. (Fig. 25.)

The fine points in a carnation are these. The flower stem must be strong and erect, the calyx must open regularly and without



Fig. 24. *The Bizarre Carnation*

bursting, and the petals must be symmetrically disposed.



Fig. 25. *The Picotee Carnation.*

In *Flakes* and *Bizarres*, the petals must be large, rounded on the edges, and regularly disposed. The ground colour must be clear and pure. The stripes must be

distinct and well defined. In Picotees, the margin colour should be narrow and well defined; the pencilling or dotting should radiate from this to the centre, and should be clear and distinct.

III. ITS CULTURE.

Why is it we so seldom see a good collection of carnations in our gardens? This question is answered by most persons, by saying that the climate does not suit them. I am inclined to think this a mistake. In Germany the Carnation is raised in very great perfection, and the climate there is exceedingly like our own.

I am well convinced that it is not the climate. I am also pretty confident that it arises from the too trifling care bestowed on this plant.

The Carnation is treated by most persons like a common Pink, or hardy border flower. I am sorry to say, that with this treatment it will not succeed here, and does not succeed either in England or on the Continent. There are, to be sure, some few hardy kinds, and among them the Picotees figure largely, which will answer very well in the open border, with a slight covering in winter. But to have a good variety of the best Carnations, they cannot be grown otherwise than in pots.

And are they not more truly worthy of this care than most of the poor starved things that figure among green-house plants? Half the care bestowed at the present day, by the numerous admirers of the Fuchsia, would afford us the most charming and perfect Carnations.

Well then, I must commence by saying, that as good a soil as need be for this plant is made by observing the following proportion, viz., two barrowfuls of fresh loamy soil (or, what is much better, the soil made by rotting down sods,) two barrowfuls of

thoroughly rotted stable manure—that from a spent hot-bed is excellent, and one barrowful of clean sand. Mix the whole very thoroughly together, throwing out the lumps, but not sifting it. You may, if you please, sift a small quantity to place on the top of the pots.

I shall speak of the propagation of this plant directly. I am now supposing the layers to have rooted sufficiently to be taken off, which they usually are about the first of September. You must then separate the layers from the old plant with a knife, lift them with a transplanting trowel, trimming off carefully any decayed or broken parts, and pot them in the soil already described, in half pint pots, one plant in each pot. Use bits of charcoal for the drainage—in other words, for covering the hole in the bottom of the pot.

The pots should all be placed together, in a cool and rather sheltered position, where they can be shaded for ten days. The plants must be pretty liberally supplied with water from this time till the middle of October, when they will be well established in the pots.

Next, for their winter quarters. This, though simple enough, is yet a matter of great importance; for unless it is carefully attended to, you may lose your whole stock in one winter's day.

The best way of keeping the Carnation through the winter, is in a common hot-bed frame with glass lights. Such a frame, three feet by eight, will hold a great many of these pint pots, each holding a young rooted plant.

Now, the great points in keeping the Carnation through the winter, are, to keep it cool and dry, and in such a condition that it will not be exposed to sudden changes of weather. A severe frost will not hurt it at all, if the plant is kept quite shaded in the

frame till it has had time to thaw out *very gradually*.

The most successful mode of keeping this plant in winter is pursued by a friend of mine, and is as follows: He chooses a common hot-bed frame, and sinks it nearly even with the surface of the soil, or at least not rising more than three inches above it, in a cool, rather shaded, *northern* exposure. He takes out the soil in the frame, about ten inches deep, makes the ground quite level and hard with a pounder. Then he cements the floor over with cheap common mortar, made of lime and loam mixed with some coarse sand. This he lays on about an inch or two thick, bringing it up snugly to the sides of the frame all round.

The advantages of this hard mortar floor are great. It keeps the plants quite free from the bad effects of accumulated dampness, which gathers in a common frame when the pots are set on the earth. Hundreds of Carnations die off suddenly in winter from this cause, and the grower is unable to account for it. On the mortar floor they are always dry; besides this, it prevents mice from getting in the frame. These little animals are very fond of Carnations, and will, if they find their way into a collection in winter, soon devour a great number.

The frame being ready, the plants are moved into it about the middle of October, or as soon as the nights become frosty. For some days, or in short till severe weather sets in, the lights need only be put on the frame at night. In the mean time water the plants moderately, as often as they appear dry. As soon as winter commences, shut up the frame with the lights. Upon the top of these place two layers of matting, and over all lay a large shutter or cover of rough boards.

Here they will remain till the spring

opens. I think it best never to open the frame during severe freezing weather. On all fine mild dry days, during the winter, you may admit air freely to the plants, but never the sun. Raise the glass, and replace the shutter for a few hours to keep out the sun's rays. They will need but very little water during the winter, unless the weather is very mild. When, by the pots appearing dry, you observe that they do need it, supply them very sparingly. If they are kept shaded and cool, they will make little or no demand for water during the winter.

If these directions are followed, you will find your plants in excellent healthy condition at the opening of the spring. When this season comes round, admit air at the beginning plentifully, but do not let in the sun all at once, only by degrees, till the plants are able to bear it.

At the beginning of April, they must all be shifted into larger pots for blooming. The soil that should be used, I have already spoken of. I will only add, that in potting the Carnation, *the earth should always be pressed down quite firmly* around the plant with the fingers. Experience has proved to me that this is quite an essential point.

In July you will have the satisfaction of seeing your plants come into full bloom—and a sight of rare and wonderful beauty it is, if the collection is a large one. Before this time, you will have tied up every strong flower stem to a neat small stake, and you should have taken the precaution to pinch off all superabundant, weak or unnecessary buds, leaving only the strongest. The latter will then have all the juices of the plant to support them, and will come out surprisingly rich and perfect.

IV. ITS PROPAGATION.

About the middle or last of July, the beauty of the bloom will be over. Now

commences the layering, to furnish a stock of plants for the next season. New varieties of the Carnation are produced from seed; but this is a tedious process, as only one seedling in ten thousand ever turns out a first rate flower. Layering is, therefore, the mode adopted for continuing all sorts of established reputation.

It is indeed quite a simple process. The annexed cut will give a good idea of it. The strongest and longest of the young

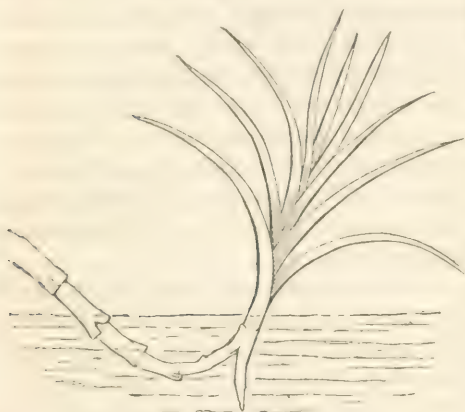


Fig. 26. *The Layer of a Carnation.*

shoots (called the *grass*) are selected. Make a small furrow in the loosened soil of the pot; bend down the shoot to find what part will be covered in the furrow; then carefully strip off the leaves of the portion to be buried. With a sharp penknife make the tongue or incision, commencing just below a joint, halving the stem by an oblique cut upward, the incision extending about an

inch. Next, with a small hooked peg, fasten down the shoot in the furrow, burying the incision not more than three-fourths of an inch. Cover the whole with a little fresh soil, which should be pressed gently around the shoot, holding the top of the shoot that remains out in a nearly upright position. Give it a little water, and the whole is complete. Every evening afterwards, the layers should be regularly moistened. In about six weeks they will be ready for potting, as I have already described. The old roots, after layering, are worth little, and are usually thrown aside.

Whoever will follow these directions, cannot fail of success in growing all the finest varieties of this very choice plant.

The Picotees, generally, as I have already remarked, may be grown with very good success in a border in the open air; and I may add a few of the hardier Flakes and Bizarres. The soil may be the same as I have already pointed out for the culture in pots. In this case, I have usually found it best to allow the layers to remain attached to the parent plant all winter—enclosing the whole bed with a rough frame, a few boards and branches of evergreens thrown over the top. In the spring, a new bed should be prepared, and the layers taken off and transplanted into it.

Trusting these remarks may have a tendency to make the culture of the Carnation more general, I remain yours.

AN AMATEUR FLORIST.

New-York, July 15, 1846.

Remarks on Stoddard's Red Alpine Strawberry.

BY J. W. BISSELL, OF ROCHESTER.

STODDARD'S RED ALPINE STRAWBERRY having attracted considerable attention in this vicinity, by its extraordinary productiveness and good size, and being worthy of exten-

sive cultivation, I cheerfully comply with your request to send you a notice of its history and qualities.

Mr. STODDARD claimed for it, that it was

a new variety, and asked and received for his plants a price that must have amply remunerated him for all the labor and pains expended in their cultivation. This is all fair, and very encouraging to those who strive for superiority. But let us examine the claims of this berry as a new variety.

The *Alpines* are readily reproduced from the seed, not sporting like the *Pines*, and have hitherto resisted all efforts to materially improve them, and are still described as being small, conical, tender and sweet, parting readily from the stem, and yielding for a long season plenty of berries, "such as they are." Other fruits are ameliorated and improved by propagating from the very best, and cultivating with great care; this seeming to be an exception, is it not fair to suppose that hitherto it has not received that care and attention necessary to produce so desirable a result? And is not Mr. Stoddard entitled to all the credit he has received? From a stock of more than two thousand seedlings, he selected that one which fruited the best, and planted it in a bed, such as few strawberry growers ever prepared. He made it by putting a layer of stones into a bog hole, and then covering them to the depth of three feet with the finest garden mould. The result might have been inferred.

I examined the bed while in bearing last summer, as did hundreds of others, among whom was the editor of the *Cultivator*, who made a flattering notice in the number for last August.

On the second day of that month, I set out some of the plants in good though rather dry garden soil, dug two spades deep and well manured. Very hot and dry weather immediately succeeding, most of the plants died, while those that survived, lost all their leaves, and were in a sad condition. This spring they appeared well, and have for

the past month, yielded very abundantly, and are now again loaded with blossoms and fruit, promising a good supply for at least a month longer. I have counted, at one time, more than two hundred and fifty berries and flowers on one of these hills. Thus far each blossom has produced a good berry, some of them measuring three inches in circumference.

Not a few persons are found who say that the common Alpine, if transplanted into a bed like that of Mr. Stoddard, would produce as good fruit and as much as his has done, yet I cannot hear of any one who has tried it. On the contrary, a friend informs me that he has cultivated the common in almost every variety of soil and situation during the last twenty years, and that he has never known it to compare with this. Yet this superiority may be only for a generation or two, and the berry may degenerate after a sufficient time shall have elapsed to have destroyed that peculiar stimulus it has so lately received. J. W. BISSELL.

Rochester, July 7, 1846.

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REMARKS.—We have now growing some plants of this new Alpine Strawberry, but they are not yet sufficiently established to warrant us in giving an opinion. Mr. BISSELL, however, has a very fine bed, and we learn from those who have seen it, that it proves beyond a doubt that this is really a most valuable new variety. It was feared by many persons that Mr. STODDARD'S plants, being grown in a soil of unusual depth and richness, it would not be found that the variety would sustain its character when grown in the common way. Mr. BISSELL, who is by no means an enthusiast, and who judges very slowly, has himself assured us since this article was written, that he believes this strawberry is a new and most valuable ever-bearing sort, and is really worthy of extended cultivation.

We will only add that the Alpine Strawberries are remarkably permanent in their character. There is, therefore, no fear that this sort after, having been proved of the first quality, will wear out or deteriorate like some of the Pine varieties.—ED.]

Mr. Longworth and the Strawberry Question.

WE have placed the name of our friend, NICHOLAS LONGWORTH, Esq., of Cincinnati, at the head of this article. The association has become a natural one, and he will not quarrel with us for awakening it at this time.

MR. LONGWORTH, as every one at the west knows, is one of the most liberal and influential citizens of Cincinnati. His garden has long been the richest and most beautiful west of the Alleghanies, and he pursues horticulture with an ardor that would drive a quiet man quite distracted.

MR. LONGWORTH, like every enthusiastic man, has his hobbies. But he is by no means content to ride them around his own grounds. Not even the state of Ohio is sufficient; although it is one of the noblest in extent of territory and richness of soil, in the Union; although it has strode onward so gigantically, that from a wilderness, inhabited fifty years ago by a few souls, it has, in this short time, grown as large as Venice, in the palmy days of that kingdom, when she was, with her two millions of souls, mistress of the world's trade. In short, our friend has used his pen so vigorously, that the reader of every agricultural paper in the country, who knows that a strawberry does not always bear fruit, knows also, that he offers freely to all, a panacea to cure its barrenness.

His two favorite topics are *Vineyards* and *Strawberries*. And however persons may differ from him in horticultural opinions, or may be inclined to take offence at the Ajax manner with which, when in pursuit of his

favorite objects, he uses his weapons, cutting about in a "rough and ready" way, somewhat regardless of the limbs of friends or enemies, still it is not to be denied that he is, in the main, right, and that he has established in the eyes of the world, two most important facts: 1st, that the banks of the Ohio can produce, in great abundance, pure wines, equal to the finest wines of the Rhine; and 2d, that by his favorite mode of cultivating the strawberry—viz., by planting a due proportion of staminate and pistillate plants—double the usual crop may always be obtained; in short, that the finest strawberries, which are rather an uncertain crop, and consequently somewhat dear in our markets, may now be considered one of the most certain products of the soil—and may be raised in such abundance as to afford them, in all our markets, at an astonishingly low price.

We have never doubted the actual result of Mr. LONGWORTH's mode, though he has classed us among the opponents of his views. We only doubted the *necessity* of it. But we trust we are neither very bigoted nor prejudiced, and we now state frankly, that having observed carefully, having experimented ourselves, and heard detailed the experiments of many sound and careful horticulturists in various sections of the country, we are ready to AVOW OUR ENTIRE ASSENT TO THE PRACTICAL VALUE OF MR. LONGWORTH'S MODE OF GROWING THE STRAWBERRY.

In saying this we do not wish to be understood as agreeing with all Mr. LONG-

WORTH's positions in relation to the strawberry. On the contrary, we differ very widely in two or three respects. But as far as regards the practical culture of the strawberry, we do agree with him.

We will presently point out our points of difference, with regard to the sterile blossoms. For the present we wish to direct the attention of our readers to the sum total of his views, as contained in a pamphlet on "The Cultivation of the Grape, and on the Character of the Strawberry Plant," just issued and distributed by Mr. L. It contains, we presume, his ultimatum on this subject, and cannot fail to interest our readers.

We ought to preface this report by saying, that at the request of Mr. LONGWORTH, the Horticultural Society of Cincinnati, two years ago, appointed a committee of nine skillful persons, to examine, experiment and report on this subject. The committee (with the exception of two, who dissented,) have just reported (June 13, 1846,) that they entirely coincide with Mr. Longworth's views, regarding the culture of this plant.

The report closes with the following paragraphs, showing the extraordinary abundance of this fruit, which, it must be remembered, is chiefly cultivated in gardens for that market. There is no city in the world half so well and so abundantly supplied with fine strawberries, as Cincinnati. Two hundred bushels a day, during the whole strawberry season, more than equal in quantity to half a million of the little strawberry baskets offered in the New-York market!

"As further evidence," say the committee, "that this is the most successful mode for the cultivation of the strawberry, they beg to refer to the quantity of strawberries sold in the Cincinnati market this season, which were furnished chiefly by those who

have adopted the system of planting female or pistillate plants, with a proportion of about one-tenth male or staminate plants, for fertilizing. The amount sold has been ascertained by a committee of the Horticultural Society. The committee reported the quantity in market, for each day, during the most productive portion of the strawberry season, commencing on the 19th of May and ending on the 12th of June, a period of 22 days, in which time they state the aggregate amount at 4,150 bushels, being an average of nearly 200 bushels per day.

"This product of fruit, compared with other markets, and the quantity of ground cultivated, furnishes conclusive evidence of the success in attending to the cultivation of staminate and pistillate varieties."

.....

Mr. Longworth's Paper on the Strawberry Plant.

I regret that the committee on the character of the strawberry plant, have not yet been able to make up an unanimous report. It arises from a failure of the crop with some members of the committee, and from a conviction with our European gardeners, that all varieties were perfect in both organs in Europe; and they are slow to believe the contrary. This I am positive is not the fact in England. In some soils and some climates, and in favorable seasons, such staminate plants as are partially perfect in the female organs, yield a larger crop than usual; but can never be made to bear a full crop. But in raising from seed, fully one-half will in general be staminate plants, and not one in fifty of them bear even a single fruit. Those that do bear, produce many defective berries. I do not believe that any soil, climate or season, can make the pistillate plant bear singly; and it is the only one worthy of cultivation for a crop. Of this, and of the staminate and pistillate character of the plant in England, we have positive evidence from their great horticulturist, Keen, himself. In the year 1809, (if my memory serves me as to date) Keen discovered that a new seedling of his, planted by itself, did not swell the fruit. On a careful examination of the blossom, it struck him that it might be owing to a defect in the male organs. He then placed some staminate blossoms in a phial of water, and suspended them in the bed. He found the fruit in the vicinity to swell immediately, and he placed more phials of staminate blossoms in different parts of the bed, and had a fine crop. His letter will be found in the Transactions of the London Horticultural Society for that year. What was true in 1809, will be found still to be true. I have further

evidence of the character of the plant in England. Fifteen years since I imported several varieties of strawberries from London, and among them I had both staminate and pistillate plants, but not one variety in which both organs were perfect in all the blossoms. The staminate varieties bore from one-tenth to one-third of a crop. Under the name of Keen's seedling, I got a pistillate plant, that impregnated, produces abundantly, and the fruit is large and fine. By themselves, an acre would not produce a perfect berry. It is not what, in England, is generally known by the name of Keen's Seedling. Mr. Keen raised many varieties. The true Keen is a staminate plant, and is more perfect in both organs than is usual, and produces a partial crop of large fruit. I incline to the belief, that for market, their gardeners cultivate the same seedling of his as the one sent me, and probably the same kind he impregnated by hand. It is truly a valuable kind, and worth twenty of the staminate seedlings. The staminate Keen is cultivated for forcing; and as the object is large fruit, all the blossoms are picked off, except three or four that set first.



Fig. 27. *Staminate Blossom.*

But, it will be asked, if true, why is this not known to botanists and to all our nurserymen who raise the plant for sale? The reasons are obvious. The strawberry belongs to a class of plants that have both the male and female organs in the same blossom. In all the white varieties I have seen, and

in the Alpines, both organs are always perfect in the same blossom. Both organs existing in all other varieties, though not both perfect in all the blossoms, the attention of botanists is not directed to it, or where noticed, is supposed to be an accidental defect. In all the other species and varieties I have seen, both wild and cultivated, I have met with one only where the defect in the one organ or the other was not apparent, and in that the fruit was very small. I have never seen a pistillate plant, (one in which the female organs predominate,) that would by itself produce any perfect fruit. Staminate plants (those in which the male organs

Fig. 28. *Pistillate Blossom.**

predominate), where partially productive, generally produce the sweetest and most highly flavored fruit. In certain soils and certain seasons, Keen's Seedling, Wilmot's, the Iowa, and some other staminate varieties will produce half a crop.

Where our horticulturists raise from seed, all the staminate plants that are entirely barren, are of course thrown away, and the few staminates that produce a partial crop of large fruit retained. A pistillate plant that, mixed with others, bears a full

crop of large berries, is transplanted, as a treasure, into a bed by itself for increase. The gardener is, the next season, surprised to find it wholly barren, and, after one or two trials, throws it away.

The nurseryman, within a space of one hundred feet square, cultivates twenty or more varieties, and a large portion of them are always staminate, and impregnate the pistillate varieties. Fruit not being their object, their attention is not directed to their bearing, and the failure of a full crop in any variety is attributed to frost or accident, or its being a bad bearer. Of this we have a strong instance in Hovey's Seedling. It is eleven years since he raised this plant; he has increased it extensively for sale. Six years since, I made known the defect in the male organs of the plant, and drew his attention to it; and asserted that an acre of them, separated from all others, would not produce a perfect berry. Till 1842, he continued to contend, and was positive that his plant was perfect in both organs. In 1842 he admitted, in his Magazine, its defect in the male organs. In 1844, he went back to his old doctrine, as will be seen by his Magazine; and it was not till the August number of his Magazine of the present year, that his mind was again mystified on the subject. How are the mere *workies* to gain information, when the editor of a horticultural magazine, and a nurseryman, who undertakes to enlighten others, has not, in eleven years, ascertained the character of his own seedling? I am the less surprised at this, and acquit Mr. Hovey of blame, as Mr. Downing, in a recent letter, assures me, that last season he raised a fine crop of Hovey's Seedling, on a bed far separated from all others; and for a still stronger reason—that even the London Horticultural Society holds the same doctrine. But the question is now under investigation, and light is thrown on it yearly by cultivators, and even the London Horticultural Society will soon acknowledge their error; but not till Mr. Hovey has satisfied his own mind, when he will doubtless draw public attention to it. Yet Mr. Hovey, in his August number of the present year, states a person had cultivated an acre of his Seedlings, where they were mixed with staminate plants, and raised two thousand quarts; and that his new seedling is valuable for impregnating his old one. Here is a tacit admission, that his old seedling is defective in the male organs. The yield was not a large one: Mr. Jackson raised at the rate of five thousand quarts to the acre, near Cincinnati, as he informed the public in a late publication. Mr. Downing, I am positive, had not Hovey's Seedling unmixed with others.*

To keep varieties separate is next to an impossibility, and the more so, as new ones are often produced in the bed from chance seed. I was absent from home two months this summer, and left it in charge with my gardener to watch the beds and keep down runners. On my return, I found the pistillate beds had become mixed, and the staminate Iowa had run on the adjoining pistillate beds,

* [What kind of evidence does our friend want to satisfy him? If he will come here, he shall have the affirmations of our ten gardeners, and our own upon the accumulated pile.—ED. HORT.]

* The pistillate blossom is usually much smaller than the staminate.

on each side, a distance of nine feet. But though Mr. Hovey appears to admit that his old seedling requires staminate plants near, on the same page, he remarks, "it is time and labor thrown away to cultivate sterile plants, as has been recommended by some individuals, when varieties *usually productive* and of *large size*, can be planted out for that purpose." He here of course refers to his own seedlings. To put this question at rest, I make the following proposition: He shall send a plant of each of his seedlings to Mr. Wilder of Boston, and Mr. Jackson of this city; and if, after a fair trial, they report them "unusually productive," I will present the Massachusetts Horticultural Society with \$500. I will do this, if they report them as producing as large a crop as the old seedling will do, where one-tenth of the ground is lost by barren plants being inserted. I will go further: if they report his old seedling as producing half a crop of perfect fruit, I will do the same thing: if they report the contrary, he must present the like sum to the Cincinnati Horticultural Society.

Mr. Hovey now states, that among all the species and varieties of strawberries, there are only four worthy of cultivation—the Virginia Scarlet, Alpine, his old seedling, and a new seedling of his, which he calls the Boston; and though raised in 1834, he has never before discovered its fine qualities. This he pronounces "perfect in both organs, a great bearer, and a fine fruit; and also suitable to *impregnate his old seedling*." He is here wide of the mark. The Scarlet is an old native fruit of Virginia, and its greatest merit is its early maturity. The fruit is of good quality, but not large. The Alpine was introduced into Cincinnati fifty years since from the Alpine mountains, by Governor Sargeant. It is deemed of little value; the flavor is not good. Its size is small, and it is only cultivated in a few of our gardens as a curiosity, and not a quart of them is ever found in our markets. What will English cultivators, who have raised so many new seedlings, say to this? What will they think of their wisdom, in having enriched some of their horticulturists, by paying high for new varieties. By the time Mr. Hovey has cultivated his new seedling eleven years more, he will discover that it has not one-tenth the value of his old seedling, and its only value to impregnate it; and for that purpose, we now have as good bearers, as fine flavored and larger fruited seedlings. His old seedling stands unrivalled with us for size, where impregnated; but we have other varieties, that are as good bearers, of nearly equal size and of finer flavor; but I would highly recommend his old seedling to all cultivators, whether for family use, or for sale. His new seedling, I have not seen.

The new doctrine of Mr. Downing, "that all plants in their natural state, are perfect in both organs, and staminate and pistillate ones, chance monsters produced by high cultivation," surprises me, for he deservedly stands high as a horticulturist. In a late number of the American Agriculturist, I discover Wm. R. Prince disputes his theory, and contends for the true character of the plant. Mr. Prince is an experienced horticulturist, and the discussion will call out other experienced gardeners; and I hope in a few years, to see strawberries

in as great abundance, and sold as cheap, in the Eastern cities, as in our own. The plant, be it staminate or pistillate, never changes its character in running.

Mr. Prince supposes the pistillate strawberry I obtained from England under the name of Keen's Seedling, to be the Methven Scarlet, as it was cultivated under that name in Philadelphia. The Methven is a different and far inferior fruit. I have the Methven Scarlet, sent me from Philadelphia as the Keen. It is pistillate, and bears a large fruit, but is an indifferent bearer, and of inferior flavor. Mr. Prince speaks of some varieties of the Hautbois strawberries, perfect in both organs, and producing very large fruit. I feel confident he is in an error. What we call the La Grange, is a Hautbois; and I have heard intelligent cultivators contend all the blossoms were perfect in both organs, and always bore a full crop. Such is not the fact. It varies greatly in different seasons. A large portion of the blossoms are wholly barren, or bear small defective fruit; but in some seasons would, to a casual observer, be supposed to be an abundant bearer. But I deem it unworthy of cultivation, where proper attention is paid to a proper mixture of staminate and pistillate plants. Where this is not done, I am not surprised to find it highly lauded. I presume it is the same as the Musk or Prolific Hautbois, but am not certain. The flavor of the Hautbois has but few admirers. On an average, not one blossom in twenty bears with me full sized, perfect fruit.

Mr. Downing describes the Old Hudson, as "a fruit with a neck." Our Hudson is the reverse of a necked fruit, and I have never seen a single berry of this kind with a neck; and I am positive that ours is the same variety that has been cultivated under this name in New-Jersey, and in the vicinity of Philadelphia, more extensively for market, for the last fifty years, than all others united. The Hudson or Hudson Bay, is described in English works as a necked fruit. They obtained it from New-York many years since, and do not consider it a first rate fruit. I incline to the opinion, that the true Hudson was not sent them, or has been lost, and a new variety substituted. It has been of late years imported from England, by New-York gardeners, and by them considered the true Hudson. The genuine Hudson is not now to be found in Boston, and probably not in New-York. It is wholly defective in the male organs, and has been thrown by as unproductive. It is a large and finely flavored fruit, and where properly impregnated, a great bearer.

Mr. Downing, in a letter to me, suggests that our Hudson has probably lost its neck by impregnation with other varieties. I hold, that the character of new seedlings is changed, where the mother plant was impregnated by a different variety, but that the shape or colour of the fruit is not, where impregnated by a variety, differing in shape and colour from the plant impregnated. I wish to see the experiment made, whether the size of the fruit of the pistillate plant is increased or lessened by the staminate plant used for impregnation. An experienced market gardener assures me that it is increased.

I have this moment received a letter from Col. Carr, an old and experienced horticulturist of Philadelphia. He writes me—"I have conversed with Mr. Hobson and others, who pay great attention to the cultivation of the strawberry, and they all unite with me in opinion." "The Hudson is the principal sort cultivated for market, and has been for fifty years. It is what we call female or prolific. It never has a neck. A Mr. Arbegust, who was my near neighbor, and excelled in strawberries, removed to Cincinnati about thirty years since, and took the true Hudson with him, and the same now cultivated here. All our principal market gardeners now begin perfectly to understand the difference between staminate and pistillate plants, and find the former such strong runners, as generally to prefer keeping them in separate beds." Mr. Arbegust for many years sold nine-tenths of the strawberries brought to our market, and raised the Hudson only. Whilst I could, from one-fourth of an acre, scarcely raise a bushel, he would raise forty bushels. His fruit was much larger than any other brought to market, and commanded from 25 to 37½ cents per quart. He made a handsome competence from the sale of this fruit. His secret he kept to himself, and had been as much noted for the size of his fruit, and the quantity raised on a given space of ground, in Philadelphia, as he was here. A chance observation of a son of his one day, in my garden, saying, "I must raise but little fruit, as all my plants were males," first led my attention to the subject. I soon discovered that there were what he called male and female plants, and communicated the fact to our market gardeners. The result was, strawberries rapidly increased in our market, till as fine as had been raised by Mr. Arbegust, were sold at from 3 to 10 cents per quart, and he ceased to cultivate them.

The British Queen, is at present the most popular strawberry in England, and much sought for here. Messrs. Cunningham & Son, of Liverpool, write me, that it is a fruit of fine size, and superior flavor, but with them is a bad bearer. That in some soils and situations, it is said to be a good bearer. Here is the old story. I am convinced it will be found to be staminate, and of no value to our market gardeners for a general crop. It may be pistillate, and its bad bearing caused by the absence of staminate plants. If so, it will be very valuable. Certain it is, it will not be found perfect in both organs.

In a late number of the Farmer and Mechanic, it is said, "foreign strawberries are unproductive about Boston, and the only ones now cultivated, are the Wood, Early Scarlet, and Hovey's Seedlings. That three cultivators near Boston, sent four thousand five hundred quarts to market in a single season." What will our market gardeners say to this! The Wood strawberry is thought by them to be worthless, and not a quart was ever sold in our market. Its only merit is, that its blossom is said to be perfect in both male and female organs. The Early Scarlet is raised to some extent; but four-fifths of all the strawberries sold in our market, are the Necked Pine and Hudson; mostly the latter. Mr. Culbertson brings more strawberries to our market than any other person. The greatest quan-

tity he has brought in any one day, was four thousand quarts; and not one of the kinds named in the Farmer and Mechanic, among them. All were the Hudson. By properly understanding the true character of the plant, Mr. Culbertson has been able to gather nearly as many quarts in a single day, as three Boston cultivators were able to do in a whole season. I saw an editorial article in a recent Eastern horticultural paper, speaking in high terms of the Alpine strawberry, as raised by Col. Stoddard, and its great produce, which yielded him at 12½ cents per quart, upwards of \$1,600 to the acre. It is an indifferent fruit, and never yielded one-fourth the quantity.

Can Hovey's seedling, or any other large fruited pistillate strawberry, be impregnated by the Alpine Monthly? It is my impression that they are distinct species, and that it cannot be done.* If it can, a cross might be produced, that with the size and flavor of the one, might be united the ever-bearing character of the other. There is a wild ever-bearing variety in our state, that would cross with the Scarlet and Pine, and is the only kind I have ever seen, worthy of the name of ever-bearing. For the Alpine, after the first crop, rarely produces much fruit through the season. Thirty years since I met with a solitary strawberry plant on Mount Adams, then in bloom. I removed it to my garden, and the plant not only bloomed freely till frost, but all the runners threw out blossoms at the same time that they made roots, and bore abundantly till late in the fall. The fruit was small but of fine flavor. A new hand in the garden, early the next spring, supposed they were weeds, and destroyed them. The old pioneer, Lewis Davis, informed me, the same variety grew in Greene county, on the cliffs, and had been frequently seen by him. I trust it may again be discovered, and Ohio have the credit of producing the only ever-bearing strawberry, [?] as well as raspberry. The latter plant, to produce a great crop, during the summer and fall, requires a moist soil. My ground in the city, is too rich and dry for it. I have never seen the plant bear as well as in Newark, New-Jersey, on a side hill, where the ground is moist, poor and stony. The plant did not attain half the size it does here, but the fruit was large, and abundant, till frost.

N. LONGWORTH.

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Having given Mr. Longworth's views entire, and having stated that we now fully acknowledge their great practical value to all strawberry growers, we trust our readers will have a little patience with us while we state the points on which we differ from him.

In our work on Fruit Trees, while we

* Dr. Brinkle, of Philadelphia, has actually attained this great desideratum. We hope to give an account of the most valuable new ever-bearing sort produced by him in this way in our next number.—Ed.

admitted the existence of staminate and pistillate plants, and the necessity of fertilizing the latter in order to obtain good fruit, we also stated that we did not consider them the normal state of any given variety, but only imperfect ones, owing to the degeneration of that sort. We then believed, as we still do, that most of our strawberries, in their normal or original state, bore perfect flowers, and that they run out into pistillate and staminate forms through bad cultivation. We, therefore, recommended our readers to "choose such plants, when in blossom, as have a natural proportion of stamens and pistils—or such as, when in fruit, show large, well developed trusses of fruit. Set a little stake down by these, and take runners only from them for your new plantation. In this way, good plantations will be secured with every plant productive."

So far as regards the general truth of the foregoing, a great deal of subsequent close examination has not induced us to change our views on this point. Notwithstanding Mr. LONGWORTH's incredulity, we still assure him, that two years ago we raised a remarkably large and fine crop of Hovey's Seedling without the proximity or aid of any other sort whatever. The same results have, to our own knowledge, been attained by many persons this season, who have grown large and perfect crops of the latter variety, for the first time, in gardens where there has either been no other strawberry of any kind, or only in distant portions of the same garden. We have examined these plants of Hovey's Seedling, when in flower, and found the blossoms large and perfect in stamens and pistils.

On the other hand, we have examined several beds of Hovey's Seedling, where the blossoms were nearly all pistillate, and were therefore unproductive, unless planted where

they were fertilized by other staminate blossoms.

What is the unavoidable inference from these facts? Clearly this, as we have stated before, and from which Mr. LONGWORTH, we believe, dissents—that Hovey's Seedling, and some other sorts, do vary from a state that is the normal or perfect one of the strawberry, into a pistillate or staminate form.

This is not mere theory with us. Let us refer for proof to our experiment with the isolated bed of Hovey's Seedling in our own garden. Last season was the first that this bed came into bearing. Being fully alive to the interest which this subject has assumed, we examined this bed, daily, when it was in bloom. As we have before stated, the blossoms were all perfect ones—large, well developed, and bearing a due proportion of stamens and pistils. With a careful search we were only able to discover *two* plants that bore pistillate flowers. There were no small plants in the bed. Every plant bore flowers and fruit. The crop excited the admiration of all who saw it, and the berries nearly all measured three and four inches in circumference.

This bed was in strong, trenched soil. It was allowed to make runners last season; but they were all taken off in September, and the same plants allowed to fruit this season.

When these same plants came in bloom in May of this year, we watched the opening of the blossoms with a great deal of interest. Here were identically the same plants, all but two of which bore perfect blossoms and the finest fruit a year ago. Would they vary? was the question now to be solved.

On carefully examining the plants, when the bed was fully in flower, we discovered that more than one-third of the plants now bore only *pistillate* blossoms. Of the re-

maintaining two-thirds, many bore perfect blossoms, as they had done previously, while a few also bore imperfect staminate blossoms. They produced only a fair crop of good fruit.

Next year we predict that this bed will have changed almost entirely to pistillate plants.

The same result that we have here stated, occurred in another part of our garden with a bed of Ross's Phœnix plants. We called the attention of several persons in our garden, at the time of their blooming, to the perfect state of some blossoms, and the pistillate form of others—to their entire satisfaction. In another part of our garden a bed of Hovey's Seedling, that has borne three years, has become entirely *pistillate*.

This is not a hasty conclusion that we have arrived at. We are forced to believe that most of the Pine strawberries, however perfect in their blossoms at first, if allowed to bear twice or more on the same roots, will degenerate into the pistillate or staminate form—Hovey's Seedling, and probably the other best sorts, into the former.

When they have once reached this state, they require the aid of other plants to fertilize them.* With the aid of such other plants, they bear large and fine fruit—in some varieties finer and more abundant crops than they did in the natural state; because the whole blossom of the pistillate plant is devoted to the fruit itself, which, therefore, when fertilized by a separate staminate blossom, must of course be larger and finer than when part of its secretions go towards the development of stamens. In this, we confess frankly, lies the great value of the mode

which Mr. LONGWORTH has so warmly and zealously urged upon the public attention.

The result of our investigations we therefore offer to our readers, as follows:

1. There are certain classes of strawberries which always bear perfect blossoms and produce good crops of fruit under all ordinary circumstances. These are the Alpine, and the European Wood strawberries, and (we may add, after a trial of fifteen years,) the variety known as the *Large Early Scarlet*.

2. There are certain classes of strawberries, especially the Pines and the Scarlets, the blossoms of which, even if perfect at first, have a tendency, through overbearing, to run into the pistillate or staminate form, chiefly the former; when this takes place, little or no fruit is produced, unless the blossoms are fertilized by other staminate plants.

3. In the latter case, a crop of large and fine fruit is more certain than under any other circumstances—partly, because the condition of the plants is fixed and not likely to vary into a barren form; and partly, because the whole secretions of the blossom are directed towards perfecting the pistillate portion, which therefore swells into a larger fruit.

4. To ensure a large crop, pistillate varieties should be chosen.

5. The proportion of staminates necessary, so far as at present ascertained, is not more than one plant to ten pistillates. The Virginia Scarlet, or Duke of Kent, are usually preferred for this purpose.

We have only one or two remarks to add in conclusion. We are now very well aware that some varieties of the Pine and Scarlet strawberries are pistillate from their first origin as seedlings. Staminate plants are also produced in abundance by sowing seeds of the strawberry, but these, when

* The staminate or pistillate form once reached, we are inclined to think, from experiments we have made, that it is permanent. That is to say, a pistillate plant always remains so. Hovey's Seedling strawberry, at first, was a perfect sort in its flower, but at this moment more than half the plants in this country have become pistillate.

truly staminate, being of no value for their fruit, are usually thrown away, and do not get into cultivation. Only those bearing perfect flowers, or those bearing pistillate ones, ever give large and fine fruit. The former, bearing well at first, have a tendency to run out into sterile forms, which is one reason why some sorts, once in high repute, are now considered worthless. As, however, cultivators become aware of the reason of this barrenness, by choosing a pistillate variety and planting near it a small quantity of staminate plants to fertilize it, they are certain of regular and abundant crops.

We believe that Hovey's Seedling, or any other large strawberry, perfect in its blossoms at first, may be kept in that state by due care. This consists partly in cultivating it well, but mainly in never allowing it to exhaust itself by overbearing. The moment this is the case, as we have abun-

dantly satisfied ourselves, the plant so exhausted takes the sterile form. It is necessary therefore, in order to preserve a Pine strawberry in its normal form, that we allow the plants to bear but once—making a new bed with the runners or offsets the same season that the parent plants bear, and always repeating this.

We have followed this course with some plants of Hovey's Seedling, and will undertake to show any one, who is yet sceptical, plants of this variety, next May, bearing perfect blossoms and fruit.

Of course, however, we no longer recommend general cultivators to follow this course which we think involves much more vigilance and trouble. The plan of fertilizing the pistillate plants is so simple, and so satisfactory in its results, that we gladly record our conviction of its value, now that the season of planting strawberries is at hand, and recommend it for universal practice.

GUANO AS APPLIED TO THE ROSE.

BY L. WYMAN, JR., OF WEST-CAMBRIDGE, MASS.

IN the fall of 1844, I received two small plants of the "Prairie Rose," so called, (a beautiful plant, the fine properties of which have been much increased by a high state of cultivation,) of about one foot in length, and one fourth of an inch in thickness. These plants I placed in my cellar in a state of rest until the next spring. The Guano applications were then first attracting public attention, and I thought the Prairie Rose would afford a good subject for experiment.

I planted one of these roots very carefully, after the following manner: Before planting, I placed in the soil beneath the roots, one half bushel by measure, of well rotted and finely pulverised horse manure,

which was entirely free from straw and earth, and covered the same about three inches with good garden mould. This rose plant grew the first season, 1845, remarkably well, and sent out four strong canes or shoots of two feet and one inch in length, and one-half an inch in thickness; but the plant, notwithstanding its healthy state, yielded no blossoms, but continued to put out small side shoots until late in the autumn, or until the season of frost. This season, 1846, this rose plant has made a good growth, and sent out five new canes or shoots, and still continues to make luxuriant wood. The new shoots are at this writing, July 2d, four feet one inch in length, and half an

inch in thickness at the root near the ground. It has yielded this season *forty-three* blossoms, and has about *twenty* buds more to expand.

The other Rose plant, being of the same size, and of equal quality with the above named plant, was treated precisely in the same manner, with this difference in the manures used; under the roots of this Rose I placed *two and one-half ounces of pulverized Guano*, and one quart, by measure, of fine charcoal dust, which was covered three inches with the same kind of garden soil as the other.

This plant began to grow and send shoots before the other, at least eight days, and continued to send up strong healthy canes to the number of six the first season, 1845, and three of these measured three feet one inch in length, and just five-eighths of an inch in thickness; the others were two feet nine inches in length and very thrifty, bearing large leaves. This plant yielded nine blossoms of a fine size and good form, the first season of its being planted.

This present season, 1846, this plant has far outstripped the other, (some twelve feet

distant only,) and for fine proportions and healthy properties, is equal if not superior to any one of the species that I have seen; it has made seven new and firm canes or shoots, and the shoots are five feet and three inches in length and six-eighths of an inch in thickness. This plant has already expanded *four hundred* fair blossoms, and there are remaining on the bush at this writing sixty or seventy fair buds and blossoms.

The ordinary culture of these Roses has in other respects been that usually given to hardy out-door Roses. No uncommon pains has been taken with them, nor have they received any winter protection, except being covered with a little fine straw during the winter months. The above is the result of a carefully noted experiment with Guano, as applied to the Rose plants; and its superiority over the best rotted manures is readily perceived.

I have been making several other experiments with Guano, in its application to *tender* plants, the results of which I will communicate to you hereafter.

L. WYMAN, JR.

West-Cambridge, Mass., July 10, 1846.

Two Experiments made to test Mr. Longworth's Strawberry Theory.

BY G. W. HUNTSMAN, FLUSHING, LONG ISLAND.

TAKING Hovey's Seedling as a subject, I procured a bell-glass, and placed it over an entire plant which had not bloomed. The flowers expanded well under the glass, but did not produce one berry. The plant was frequently agitated to put the pollen in motion, if there was any.

I also introduced under a glass some blossom buds before they had blown. These, as they successively expanded, showed no signs of swelling. I impregnated at differ-

ent times two of the blossoms by hand, applying the pollen from another plant with a camel's hair pencil. These two set their fruit perfectly. The pistils of the other blossoms soon turned to a dark colour. These experiments were made at the north side of a picket fence, where the plants were screened from the full effects of the sun, otherwise the heat under the glasses would have been too great.

These experiments prove, to my mind,

very conclusively that Hovey's Seedling will not bear any fruit unless impregnated by some staminate variety. And the same may be said of other varieties in which the stamens are *obsolete*. I have had some plants of the Hudson Bay for three years, in a position where they cannot very easily be impregnated by other kinds, during which time they have not borne one berry, while other plants of the same variety, exposed, have been productive. A difference in the formation of the flowers on different plants, is not confined to cultivated kinds, but may be seen in those growing wild in the fields, the *pistillate* plants of which I have often examined with a magnifying glass, to see if I could discover any pollen, but have never been able to find it; I am forced, therefore, to believe that *pistillate* plants, both wild and cultivated, are absolutely devoid of pollen, and cannot, therefore, produce any fruit except when impregnated by others.

I am also convinced from observation and theory, that one kind will never change to the other by off-sets. The runner bearing the same relation to the plant producing it as a tree grown from a bud does to the tree from which it was taken. It may, then, be asked, how does it happen that there are *pistillate* and *staminate* plants of the same

variety? *I answer, it is not the fact*, unless they have sprung from seed, or the plants have been taken from the fields in a wild state.

That *pistillate* plants are surer and better bearers than *staminate* plants, is, I think, generally true, (provided, of course, that they are impregnated.) And it would seem reasonable to infer that when but one of the sexual organs is complete, the other will have more strength. Plants, therefore, that are perfect in both organs, require a higher state of cultivation. There is, however, a wide difference in the productiveness of different kinds, that are perfect in both organs, some being much more liable to *blast* than others.

G. W. HUNTSMAN.

Flushing, L. I., July 14, 1846.

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REMARKS.—These experiments are interesting and to the point. The plants of Hovey's Seedling, made the subject of trial in this case, were evidently distinctly *pistillate* plants. Our correspondents should bear in mind to state this point distinctly in their details of experiments on this subject. Our correspondent is, no doubt, correct in his opinion, that a truly *pistillate* or *staminate* never changes. But he does not touch upon the query, does a normal or perfect blossom change? This is the point.—ED.]

REVIEWS.

THE JOURNAL OF THE HORTICULTURAL SOCIETY OF LONDON, Vol. 1, Parts I and II, 8vo. London: Published for the Society, by Longman & Co. 1846.

THE Horticultural Society of London holds the undisputed first place among all bodies of its class in the world. With the Duke of Devonshire, whose *jardinomanie*, outstrips that of any amateur of the age, for its Presi-

dent,—Dr. Lindley, the leading botanical and horticultural writer of the day, for its Rec. Secretary,—Robert Thompson for its pomologist, and equally able assistants in all other departments,—with its large garden at Chiswick, where most of the various fruits and vegetables of the world are tested,—with its shows patronized by Royalty, so attractive and fashionable that at the last

meeting no less than 13,421 persons visited the exhibition in a single day,—with its collectors sent to remote and little visited countries, in search of new plants,—with an income of over \$30,000, which is chiefly expended in medals and prizes for the encouragement of horticulture, and in keeping up the garden,—with all this, we say, it is easy to see that the Horticultural Society of London exerts a strong influence on the gardening spirit, not only of England, but of the world.

These two neatly printed and illustrated numbers, which have just reached us from London, are the commencement of a new work, to be issued periodically by the Society. In the advertisement to the first number, it is announced that "this Journal is published by the Horticultural Society of London, for gratuitous distribution among its Fellows, and in place of the quarto Transactions, which will be discontinued after the appearance of another part. It is intended to contain scientific and practical papers on horticultural subjects of all kinds, the journals of the Society's collectors abroad, and an account of the proceedings at the meetings of the Society, in London and at the Garden."

In short, the present work, we presume, may be considered as a change from the somewhat heavy and expensive shape of the old *Transactions* of the Society, to the more digestible form and moderate price demanded by the spirit of the times.

The first two numbers contain several interesting articles. The Potato disease—the wide extension of which in Great Britain, has caused such distress for food in many of the poorer districts of that kingdom, is the subject of the first two articles. "*Observations, botanical and physiological, on the Potato Murrain*, by the Rev. M. J. Berkley." This writer gives a somewhat detailed his-

tory of the disease in the potato in various parts of the world. The result of his observations may be summed up in the following paragraph :

"To my own apprehension, then, it appears clear, at least, that the cause of the premature decay and putrefaction of the haulm is to be found in the parasitic fungus, (*Botrytis infestans*), in consequence of whose attacks, the tubers are unripe and in a bad condition for preservation. Under these circumstances, if decay takes place, there cannot be much matter of surprise; and that, as in all cases of decay, various species of fungi should establish themselves upon the tubers and accelerate it."

"The disease," he adds, "can scarcely be expected, after having had so extensive a range, to subside all at once. The same atmospheric conditions which have favored its progress, are not likely to occur again; but still, I fear that it will be felt directly or indirectly for some time, as, in the human frame, the general prevalence of a particular disease, modifies other diseases for many successive seasons."

Article VI., is a very interesting one on "*The Main Points of Vine Cultivation*," by Mr. Robert Errington. The author of this article is a very clever, practical man, the gardener to Sir Philip Egerton, who has exhibited remarkably fine grapes, at the shows of the Society. This article is one that we think will interest all our growers of the grape under glass, and as the journal which contains it, falls into very few hands in this country, we shall extract it entire. We must, however, premise that a great difficulty attending the vine culture in England—the moisture which accumulates in the soil in the damp climate of that country—scarcely exists at all here. Our bright sun soon dissipates all excess of moisture in any soil fit for grape culture. But the practice recommended, of making deep and *very porous* vine borders, is not less beneficial here, since it wonderfully promotes the vigour of the vine and tends to prevent its being affected or checked by our sudden fluctuations of temperature :

In compliance with the desire of the Council of the Horticultural Society, I beg to accompany the late grapes now exhibited, with a few general remarks on the most important points connected with the cultivation of the vine, especially under glass.

With regard to border-making and thorough drainage: I am persuaded that a vast proportion of the grapes which do not colour well, are planted in borders not adapted to meet the great extremes of moisture to which our fitful climate is subject. It is also certain that over-cropping alone is one cause of the colouring, and of course the flavoring, process being incomplete in a great number of cases.

It is quite clear from numberless instances, that porous materials for the mere transmission of moisture, and of course atmospheric influences, may be used to the extent of nearly one-half the volume of the compost with propriety. Mr. Hoare's system, as it is called, although a failure, will, I make no doubt, have done much good in this respect; one of Mr. Hoare's chief errors being undoubtedly the total exclusion of soil from his compost.

Whatever depth of border may be adopted, the substratum should be so complete as to bid defiance to excess of moisture from both springs beneath, and atmospheric moisture above. This being secured, the next point is compost; chopped turf of a loamy character, and inclined to what is termed "sandy loam," is, I am assured, complete, or nearly so, in itself for this purpose, providing the previous points be efficiently secured: as, however, soils, as well as subsoils, differ so much in point of mechanical texture, it is perhaps wise on the whole to use a mixture which, in point of texture, may bid defiance to all weathers.

Two-thirds then, of the loam above described, with the other third composed of equal parts of charred brush-wood, old plaster, and what is termed by agriculturists "half-inch bone," (boiled bone,) will be found all that can be desired or nearly so in border-making.

The loamy turf should be from very old rest land, the older the ley the better; if not of considerable age, I would prefer it from an old lane or road side. It should be merely quartered with the spade, and should by no means be either cut or handled in any way when wet; dryness is as indispensable a point in handling the material for a vine border as for harvesting.

The loamy turf should be thrown in alternate layers with the other portion of the materials, which should be well blended together and close at hand:—some raw stable manure, chiefly droppings, should be strewn in thin and regular layers, all through the mass. Before, however, filling the above compost, which I should advise to be two feet in depth, I would place a layer of half-charred brush-wood, of some strength, over the drainage and substratum; this layer should be nearly a foot in depth.

Such a border I am assured would defy all weathers, and would be found after several years, on the stamp of a foot, to have preserved its elasticity in a very considerable degree; providing that mortal enemy to texture, "the spade," be kept from it. It would only be necessary to cover the roots occasionally with a slight dressing of raw manure, the moment the vines had cast their leaves.

Some cultivators seem to think that a healthy

vine will carry all the fruit it may "show;" so it will, but in what way?—why, in the production of small berries, deficient in colour and flavor; for be it understood, the two latter points always accompany each other. In addition to this, another evil is to be feared, viz: an injurious lessening of the vital energies of the vine.

It will generally be found, I believe, after all the complaints about large grapes, that the latter, when *thoroughly* coloured, are decidedly richer than the under-sized ones.

It may be asked therefore, what is the true medium to be observed? It is, I confess, not easy to answer this so as to be perfectly understood; however, as a general rule, I should say that spurred vines confined to the rafter, and established on the principle of border-making before detailed, will assuredly, under good management, produce from fifteen to twenty pounds weight each, every year, for many years. Vines spread over the whole house will yield a third more. It is, however, a better plan, where very superior fruit is the object, to keep below this mark. The leading shoot, if there be one, is a pretty good criterion of the energies of the vine; this, if the vine is honestly cropped, should always be disposed, and also allowed, if possible, to ramble freely.

One point in connection with good grape-growing is an elevated border. One half of the cubical contents of a vine border should, in my estimation, be above the ground-level of the front walk. Now it will be found, I believe, on close examination, that a great portion of the old vineries in the kingdom, by a defect in the original plan of fixing the floor-line too low, preclude, by the level of the front sashes (if any exist), the possibility of the border being much higher. Now as it will, I conceive, be admitted that the floor-line has in most cases an intimate relation with the wall-plate, and of course the front sashes, it becomes a matter of considerable importance to establish it aright; and I always consider it an omen of good vine culture to ascend into a viney by several steps.

Another and a very common error, according to my opinion, is the mode of managing young vines for the first two years in newly-planted vineries: they are disbudded and trimmed as sprucely as if the object was to carry heavy crops and to obtain plump eyes. Now the primary object of good cultivation should be, I conceive, to obtain a border tolerably well filled with roots.

The best way to accomplish this, is to allow the top to run riot entirely for the first year, and nearly so in the second; for without abundance of leaf there cannot be abundance of root. In the second year, however, the laterals should be stripped entirely away, in a progressive manner, from as much of the main stem as it is intended to retain at the winter's pruning, in order to admit light to the principal leaves, on the agency of which the success of the first year's fruit depends.

It has been the opinion of many, perhaps the majority of cultivators, that "shanking" in grapes is occasioned by atmospheric influences: I am of a very different opinion. I do not however say that such checks, through sudden depressions of tempe-

nature, do not assist in causing it—they fairly may. The chief cause is, however, torpidity in the action of the root, perhaps at the very period when the greatest demand is made upon it to sustain the excessive perspiration which is going on in the leaf, and to furnish fresh matter for elaboration; to both which ends it is frequently quite inadequate, owing to drenching rains.

If the young fibre be examined at such inclement periods, it will be found somewhat discoloured; nay, in some cases quite rotten. And this is not to be wondered at when the habits of the plant are duly considered, and the difference estimated between a vine on the slope of a rocky surface in the south of Europe or Asia, with six inches of soil, and one in the cold northern clime of Britain, in four or five feet of rich soil, every breathing pore closed with a kind of alluvium. This is no overcharged picture—I have seen scores of such cases.

Besides, if shanking were caused by sudden depressions of temperature, why should it not occur more frequently on walls out of doors, where the thermometrical changes are at least as great as in doors? Yet here it seldom occurs, and here again the border is seldom so deep, so rich, or so far below the surface level, as some of our hot-house borders, many of which contain material sufficient for thrice their extent.

The West St. Peter's Grape, of which I now send specimens, is undoubtedly the best late grape in the kingdom in every respect. It is not sufficiently known at the present time, nor its habits sufficiently understood; added to which there are spurious kinds under cultivation. It is a grape which will endure as much heat as a Tokay, and might be planted in the same house. Still with me they are classed with the Hambros for latest purposes, and have to endure a very moderate temperature; however, I never knew one to shank, and I consider it the safest colouring grape in cultivation. The flavor is moreover exceedingly brisk and rich, and the bloom, when syringing is withheld, is most beautiful. On its own root it is apt to make slender wood, especially for the first three or four years; it is also liable to wither at the point of the growing young wood, at intervals during the growing season, during that period. This, I have no doubt, arises in a considerable degree from the same cause as "shanking," according to my ideas of that evil, as before described. However, as the border becomes more full of roots this evil departs altogether—at least it has done so with me—for those under my care, at first liable to shrivel in the wood, have now been perfectly free from it for years.

I would here beg to recommend those who are inclined to grow the St. Peter's, to graft it on the Black Hambro' stock. This was pointed out to me some years since by the Earl of Sefton's gardener at Crozeth (Mr. Balmer), and I have found his opinion to be correct. Mr. Balmer had pushed the cultivation of this grape to a great extent some twelve or fifteen years ago, and used to produce at that period some of the most splendid fruit I ever saw. Two reasons appear to me to recommend this practice: first, the Black Hambro' root is har-

dier or better adapted to stand the low ground temperature of this climate; and, secondly, the Black Hambro', through this circumstance, has a later action of root than most other vines, and consequently the berries are longer fed with the ascending current. This is, I think, tolerably manifest from the circumstance of the Hambro', in a mixed house of vines, being the last or nearly so to fade.

The Muscats will also, I have no doubt, be found to do better when treated this way, for the same reasons.

Syringing not only may but ought to be dispensed with after the grapes are "set," if a fine bloom is desired; a sufficiently humid atmosphere may at all times be maintained without the syringe. One of the most simple and efficient plans is to enclose the return-pipe, if hot water be used, with a cemented brick trough, with a plug at the end, to empty its contents into a waste-drain when necessary; the top of the cemented trough, of course, left open. As for the arguments in defence of syringing, such as the danger of Red Spider, &c., they will all fall readily before an atmosphere properly charged with moisture, not variably, but permanently.

The best late grape-growing I ever saw, established on sound principles, was at Colney Hatch—Mr. Crawshaw's. Those who are acquainted with that system would do well, in my opinion, to apply it to the growth of the St. Peter's Vine, for late purposes. Mr. C. prunes, as is well known, to the "spur-eyes." Now I know of no vine that will better bear the "close-spur" method than the St. Peter's. Mr. C. moreover allows, or rather prefers, two or perhaps three shoots from one pair of "spur-eyes," each with a bunch of half a pound to three quarters, to one shoot with a bunch of double or treble the weight. Small bunches with large berries, well fed and well thinned, are found to keep much better than large bunches; the reason is obvious—the air circulates more freely through the bunch.

I need say little about the "ripening of the wood:" this principle is well known, and I should hope its importance admitted; too much stress cannot be laid on the point, and many are the failures through the neglect or misunderstanding of this very thing.

I am of opinion that what is termed "close stopping," is frequently carried too far; a main leader should in all cases be allowed a good deal of liberty, this being the very thing that produces a fresh volume of root to invigorate the system of the plant for ensuing seasons. I am well aware that it will be said that this militates in some degree against extreme size in the berry. Be it so. I would willingly give up so trifling a point (provided it can be proved) for a more invigorated and permanent system in the vine.

The leading article in the second number is a long and interesting one by Mr. Edward Solly, the experimental chemist to the Society, "*On the Influence of Electricity on*

Vegetation." Mr. Solly recapitulates all, or nearly all, the experiments made with electricity, applied as a stimulant to vegetable growth, beginning as far back as Dr. Maimbray's result with the two electrified myrtles in 1746; and brings the account of our knowledge on this subject down to the present day.

Our readers will remember the startling account of the growth of crops under electric action, which went the rounds of our agricultural papers, about a year ago. Mr. Ross's report, read before the Farmer's Club in New-York, in which he stated that by galvanizing a row of potatoes two hundred feet long, merely by putting down at one end of the row a copper plate, at the other one of zinc, and connecting both by a wire, by which he was able to dig full grown potatoes, while the ordinary rows on each side, contained only half formed tubers; and, still more, that of Dr. Forster, who enclosed part of a barley field in Scotland with a few poles driven into the ground in the form of a square, over which wires were stretched, making a wire parallelogram, eleven feet high, which was connected with a similar square, formed by wires running at the base of the poles, about three inches under the soil—the result of which was stated to be the most strongly marked difference in the luxuriance and product of the parts of the barley field thus acted upon by the intercepted current of electric fluid; these accounts, naturally enough infected all the experimentalists on both sides of the water with an electric fever, ourselves among the number. We failed completely, and we have heard of no single well authenticated account of success. The brilliant hopes of inducing galvanism, or, as one of our friends wittily remarked, "*complacent lighting*," to do the work of that good old

fashioned clumsy substance, called manure, have gradually faded away like a summer cloud.

A very interesting series of experiments to test this matter, was carried out by the Horticultural Society. They prove that no practical benefit is yet within our reach from the action of electricity on vegetation.

Article XIV. is entitled "*Some account of the Jefferson Plum*," by Mr. Robert Thompson, the head of the fruit department in the Society's garden, and author of its celebrated *Catalogue of Fruits*. A beautiful coloured plate is given of this, our favorite plum, representing a fruit considerably below the size, however, which it attains in our gardens. We think the Jefferson requires the hot sun of America to bring out its highest flavor; but the following remarks will show that even in England it will hold a high rank:

This is an American variety of the highest excellence. It was presented to the Society in 1841, by Mr. James Barnet, who obtained it for his nursery at Edinburgh from Mr. Wilson, nurseryman, Albany, New-York. It fruited for the first time in the garden of the Society last season, an unfavorable one for plums and fruits generally. Nevertheless, the variety in question was found to possess so much merit as to render a drawing of it desirable from a specimen, produced on a standard, to which the rest on the tree were very similar.

It appears from Mr. Downing's "*Fruit and Fruit Trees of America*," recently published, that the Jefferson Plum was raised by the late Judge Buel, and that the original tree was growing in his garden near Albany. The judicious author of the above-mentioned work says, "If we were asked which we think the most desirable and beautiful of all dessert plums, we should undoubtedly give the name of this variety." No one can read this statement without recollecting the well known excellence of the Green Gage, and questioning whether, in point of flavor, it can possibly be equalled by the variety under consideration. To say that the Green Gage, under the most favorable circumstances for acquiring perfection, would be surpassed, might prove an exaggeration. That remains to be determined. In the mean time it can be stated that in the past unfavorable season in which only there has been an opportunity for comparison, the Jefferson was found decidedly superior to the Green Gage.

There is a good deal of interesting information on various gardening topics, notices

of new plants in the garden of the Society, its proceedings, &c. &c.; on the whole, we look upon this Journal as one of the most interesting horticultural works of the day, and shall keep our readers informed of the novelties that appear in its pages. It is not stated how often it is to appear. The price, to those who are not Fellows of the Society, is about \$1.50 per number here, including the importation duty; and the work may be ordered through Messrs Wiley and Putnam, New-York.

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CENTURIE DES PLUS BELLES ROSES, choisies dans toutes les tribus du genre Rosier; peintes apres nature par MME. ANNICA BRICOGNE; accompagnée d'un texte descriptif de toutes les variétés connues, &c. Par M. VICTOR PAQUET. (4to. Paris, H. Cousin, Rue Jacob.)

A BEAUTIFUL French work now being published in Paris in numbers. Each number contains two portraits of the rarest and choicest varieties of this universal favorite, given of the size of nature, and exquisitely coloured. The Bourbon, Hybrid Perpetuals, (or *Hybrides Remontantes*) and Tea Roses, occupy of course the most conspicuous place.

Although the Rose is the flower *par excellence* from all antiquity, yet it may be said with perfect truth, it is only within the last few years that its incomparable beauty and value have become known to the world, since it is only very lately that these new hybrid productions, which are purely the triumphant results of scientific gardening, the offspring of *hybridization*, have been produced. The Rose was once but a fugitive beauty, opening its petals only to the first breath of summer, then fading quickly and remaining a neglected and forgotten bush for the rest of the year. Now, thanks especially to the charming Bourbons and Hybrid Perpetuals, we can gather Roses of large size, superb forms and delicious colors,

from the open garden from April till November.

The portraits of the finest new varieties in the work before us, are very striking and satisfactory ones. Princess Adelaide and Prince Esterhazy, two magnificent Tea Roses, are particularly beautiful.

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TRANSACTIONS OF THE CINCINNATI HORTICULTURAL SOCIETY, for 1843, '44 and '45; with the Charter, Constitution, By-laws, List of Members, &c. (8vo. Pamphlet, 68 p. Cincinnati. 1846.)

THIS is a spirited and active young Society, and, as we hear from all sides, is doing a great deal for the advancement of horticulture in the Western States. Indeed Cincinnati, if we mistake not, is destined to become a rival to Boston, at no very distant day, in the zeal and energy of her cultivators.

It ought to be the ambition of this Society to found, at the earliest possible moment, an experimental garden or orchard. There is even more need of it there, than here. The confusion in the nomenclature of fruits, especially throughout all the west, is, as we have found to our own great perplexity, truly endless. Many amateurs, finding a good variety of fruit in their garden which they do not know, bring it forward as a seedling, when it is a sort which is old and well known at the east. And many persons, who have received from nurserymen here, kinds of fruit under celebrated names, which are not correct, do not hesitate to denounce them as worthless there, when they have never had the genuine variety in their possession at all. A garden with specimen trees of all the leading sorts of fruit, backed by the authority of a Society like this, would soon correct an evil which, we can plainly foresee, will otherwise last half a century more, to the annoyance of all those who desire to arrive at some standard in pomology.

On p. 17 of these Transactions, we find an article by Mr. S. S. L'HOMMEDIEU on the "*Extirpation of worms from the roots of Peach trees.*" He states, that his trees having been much infested with the Peach-worm, he applied the mixture of salt and salt-petre to the roots for three years without success. He adds, "in the middle of June last, on the appearance of Dr. Kirtland's letter in a gazette, recommending the application of ashes or slacked lime, I applied half a peck of slacked lime to each tree, on the surface of the ground, in contact with the trunk. Last week, (Oct. 28th,) I again had the trees examined, *but found no worms.* The roots of the trees appear healthy, there being no gum oozing from them as at first. The whole orchard looks remarkably well, and will compare favorably with many that are younger in this neighborhood."

This corresponds with our own experience. There is no difficulty in preventing the Peach-worm from destroying peach trees, if a small heap of slacked lime is put about the collar of the tree every spring.

On p. 14, it is stated that one individual, Mr. CULBERTSON, sent to the market of Cincinnati, in a single day, *four thousand quarts* of strawberries. He employs sixty hands in gathering. "The plan of shipping them to New-Orleans, packed in ice, has just commenced, and may eventually become an important branch of business."

Vineyards are springing up on every side of Cincinnati. There is a very interesting report of a committee appointed by the Society, through its chairman, Mr. FLAGG, of the vineyards in Hamilton county. We

shall, hereafter, return to this report. From the survey of the several vineyards, many of them new, and as yet only half in a bearing state, we find that even in 1845, which was considered an unfavourable season, 23,219 gallons of wine were made from 144 acres of vineyards in Hamilton county alone.

On this subject we find a short article by Mr. WM. RESOR, which is, practically, so much to the point, that it will interest all cultivators of the grape; and we shall give it in a future number. Mr. Resor, very obligingly, sent us a sample of his Catawba wine, which is an excellent Hock.

In "*A list of Cherries that have been tested in Ohio,*" by our friend Professor KIRTLAND, of Cleveland, we observe the following memorandum:

"PLUMSTONE MORELLO.—I can discover no properties in this fruit that render it worthy of cultivation. It is not equal to several other varieties of the Morello."

Prof. Kirtland is evidently in error here, and has not received the true Plumstone Morello. Wherever known here, it is very highly esteemed, being one of the largest, most productive, and best flavored, of the acid cherries. We have compared it this season, with four other of the most celebrated European Morellos that have borne fruit in our gardens; it is fully equal to the best in flavor, and is rather the largest in size.

There is quite a variety of other interesting matter in this pamphlet, which we have not space to notice. The exhibitions appear to have been very creditable to the Society, and we are gratified with the strong evidence which these pages give us of its healthy and prosperous condition.

PROTECTING TREES FROM MICE.—A correspondent of the Gardener's Chronicle mixes soot and milk till of the consistence of thick paint, and then applies it to the trees with a

brush. This, applied once a year, he finds effectual protection against hares and rabbits. Would it not be equally so against mice?

FOREIGN NOTICES.

LAST EXHIBITION OF THE LONDON HORTICULTURAL SOCIETY.—The visit of Ibrahim Pacha last Saturday to the Great Exhibition in the Garden of the Horticultural Society will, we trust, prove as beneficial to Egypt as it was interesting to himself. For the gratification of those who wish to know the effect produced upon the mind of the African Prince by so extraordinary a display of what he could never have previously seen, or imagined the existence of, we may state that his Highness was delighted by the spectacle. The Pelargoniums, large specimen plants, Cacti, and Heaths, appeared to be viewed with great admiration, for, upon being asked which of them he would be desirous of taking back to Egypt, he cast a rapid glance over the mass of flowers, paused for a moment, and, throwing up his arms, exclaimed, "All, all." The Pinks and Ranunculuses, with which he was familiar as natives of the East, were viewed with pleasure, as were the beds of Roses. In examining the fruit, Peaches and Nectarines, a few of the Pines, and the noble Strawberries most excited his admiration, but he had seen finer Cherries than any before him. How much the Pine-Apples weighed, how many persons would come, how many tickets were sold, how much money was given away in prizes, and similar statistical inquiries, seemed most to engage his serious attention. He was evidently much gratified at his reception by Lord Auckland on the part of the Society, and by the attention he received from the noble Earl, and Lord Normanby, who accompanied him during the whole of his stay; and he quitted the gay scene most unwillingly at half-past 2, on his way to Birmingham, expressing his great regret that the necessity of his arrangements left him no alternative. Had the Pacha known that between 13,000 and 14,000 visitors would have thronged to the Garden in the afternoon, of whom at least two-thirds would be charmingly dressed women, we suspect that his regret would have proved the master of his necessity.

With respect to the Exhibition itself, we may state that although the gay Azaleas of May were missed by everybody, yet that the general effect was as good as ever. The Pelargoniums were in their glory. Orchids were magnificent: who, for instance, ever beheld such a bank of these plants as was this time brought from Mr. Rucker's garden, among which was an *Aerides odoratum*, to have produced which alone would have made the reputation of any gardener. Then the fruit, which was so meagre in May, did honor to the skill of English gardeners, and so the Pacha seemed to think, although, from the remarks of a correspondent in another column, it appears that the judges were of a different opinion. The Heaths were better than before, and a single plant of *Erica ventricosa purpurea*, from the garden of Sir George Staunton, was as fine a thing in its way as the *Cyrtopod* of the previous exhibition. Of

such things as these we can only say that high gardening can go no further.

More novelties were present than before. The Royal Botanic Garden at Kew sent the charming *Torenia asiatica*, whose indigo stained flowers everybody stopped to admire, although by some oversight it had not been properly marked. Mr. Veitch furnished a beautiful little long-spurred Balsam from Java, with *Æschynanthus pulcher*, a good and new form of that fine genus.

Considering that the thermometer had stood near 82° for the previous fortnight, that it ranged as high as 86° in the shade and 97° in the sun, during the Exhibition, and that the plants can hardly be said to have felt it, so fresh and unflagging was their appearance, we should wish to ask, how we are to measure the skill of the exhibitors who had successfully contended with such adverse circumstances?

There were no accidents among the ocean of carriages, but it took a long time to find the latter, so that either from that circumstance, or an unwillingness to leave the coolness of the garden for the heat of London, many visitors lingered till the evening had nearly closed in. The exact number of visitors was 13,421, exclusive of supernumeraries.—*Gardener's Chron.*, June 20.

SOLANUM LYCIOIDES. Lycium-like Solanum. Greenhouse Shrub. (Nightshades.) Peru.—This charming shrub was found by Mr. Hartweg, in the valley of San Antonio, in Peru, and flowered in the Garden of the Horticultural Society in November, 1845. It has a neat habit; the flowers are of the richest sapphire purple, enlivened by a bright yellow eye, and in the wild state appear in clusters, so as to load the little spiny branches. The name is a happy one, for in its natural state it is very much like a dwarf *Lycium barbarum*. In cultivation, however, it loses some of its stiff spiny habit, and has hitherto not yielded flowers in clusters; but they are larger than in the wild state. It is by no means new to Europe, for it was represented in Jacquin's *Figures of Rare Plants*, above sixty years since; but it has disappeared from the gardens of this country. So very poor, pale blue a variety was indeed at that time possessed, that it hardly deserved to be preserved even in a botanic garden. It is found to be a greenhouse plant that succeeds in almost any kind of soil, but to prefer a sandy loam, mixed with a little rough peat. To flower it well, it seems necessary to place it out of doors during summer, in some exposed situation where it can remain till the end of September. By that time the flower buds will be formed, and they expand in a short time after the plant is taken in doors. It is easily propagated from cuttings, and must be regarded as a good addition to our autumn flowering greenhouse shrubs.—*Botanical Register*.

ACHIMENES PATENS. Spreading Achimenes. Green-house Herbaceous Plant. (Gesneriads.)

Mexico.—One of the first objects to which Mr. Hartweg directed his attention on his return to Mexico, in 1845, was the recovery of this beautiful plant, which he had found in the course of his former researches, but which had not been reared in the garden of the Society. Although the season was so far advanced that herbage had all become withered, he succeeded in discovering some roots, which were immediately sent home by the post, and proved to be this plant. Nor does it disappoint the expectations that had been formed of it; for with the habit and foliage of *A. longiflora*, it bears flowers of so intense a violet that no artificial colours can imitate them. This most remarkable tint fades away on the outside of the corolla into a clear bright purple, and is renewed on the tube of the corolla in an intermediate tint. The border of the corolla is slightly notched, and its tube is extended into a singular blunt horn, which projects beyond the calyx, and is more or less lobed at the sides. The corolla measures about an inch and a half across the flat border, and the tube is rather larger. *Achimenes* patens, like most of the other kinds, may be treated so as to flower nearly at all seasons of the year, and only requires to be kept in a dormant state and quite dry when at rest. It should be started gradually, and grows best in a soil composed of a small portion of well decomposed cow-dung and half decayed leaf mould, in a very rough state.

It is easily increased by the scaly roots, and requires a close atmosphere, but not a very damp or hot one. It is a very handsome kind, being one of the finest both for colour and foliage.—*Journal of London Horticultural Society*.

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GARDENIA FLORIDA, L.; var. FORTUNIANA. Mr. Fortune's Cape Jasmine, *Green-house Shrub*. (Cinchonads.) North of China.—The common single and double varieties of this plant are known to every one. That which is now noticed differs merely in the extraordinary size of the flowers, which are nearly 4 inches in diameter, and in having fine broad leaves, sometimes as much as 6 inches long. The flowers are pure white, changing to light buff as they go off, and not unlike a very large double Camellia. Their calyx has the long broad lobes of the original species instead of the narrow lobes, at least twice as short as the tube of the corolla, of *G. radicans*, by which that species is technically known. It is one of the very finest shrubs in cultivation, and ranks on a level with the double white Camellia, which it equals in the beauty of the flowers and leaves, and infinitely excels in its delicious odour.—*Jour. of London Horticultural Society*.

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ROSE-COLOURED HALEZIA.—“M. Leroy has, in his nurseries at Angers, a Silver Bell Tree, *Halesia tetraptera*, with rose-coloured flowers: in the form of the flower, the leaf, and the general habit of the tree, it does not differ from the common *Halesia*; the petals are, however, rose-coloured, marked with longitudinal stripes of darker red. M. Leroy has cultivated this tree for fourteen or fifteen years, among many others of the common *Halesia*, whose flowers are pure white; but it is only lately that

the difference in the colour of the flowers has been noticed. It is now being largely propagated and will soon be offered for sale abundantly.”—*M. Pepin in Revue Horticole*.

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TO RAISE CEDARS OF LEBANON.—“M. Leroy employs a very simple mode of raising this somewhat difficult tree from the seeds. Instead of endeavoring to get the seeds out of the cones, (which it is always a difficult matter to do without injuring a great many,) he plants the cones entire in the earth. In this condition they find just the necessary state of moisture; they germinate between the scales of the cone, of which latter many fall to pieces of themselves. It is then easy to take them up and transplant them in the open air, or in pots.” [A shady north border is preferable for young seedlings in this country.—*Ed.*] “In this mode, which is the nearest approach to the natural one, every fertile seed germinates.”—*Ibid*.

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APPEARANCE OF THE PAULOWNIA AS A LARGE TREE.—We are now able to judge of the effect of the Paulownia as an ornamental tree. The oldest tree in France, that planted in the open air in 1836, by M. Newmann, in the garden of the Museum of Natural History, Paris, is almost in an adult state, and has assumed its proper character. We can then predict that this tree will assume in a great degree the shape and the dimensions of an apple tree, and that its proper place therefore will not be in the avenue, but as a single specimen, or forming small groups on the lawn. Its straight and pyramidal clusters of large blue flowers (resembling in size and shape those of *Gloxinia caulescens*) lose something of their effect when they begin to bloom, because they expand before the leaves. But towards the middle and close of their blooming season, the foliage is rapidly developed and forms a rich back ground, making a magnificent appearance by their number, their colour and their gay effect. It is then a very charming tree.

The Paulownia forms its flower-buds for a next season in summer, so as to show very conspicuously in September, the clusters of large buds so well clothed as to stand the cold of winter perfectly. This gives it rather a singular effect. But it would be more charming if its large leaves were fully developed before the flowers opened. *Poitau, Annales de la Société d'Hort. Paris*.

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REMARKABLE CEREUS SPECIOSISSIMUS.—M. Pepin gives an account of an extraordinary specimen of this brilliant Cactus, in the possession of M. Gervais, at Audilly, valley of Montmorency. “It is an old plant and has been growing in the ground in a green-house for seven years past. It covers the whole surface of the wall of this green-house, which is 15 feet high and 40 feet long. It produces every year from 1,500 to 2,000 flowers. From 400 to 800 are often seen expanded at the same time when the effect of the rich colours is that of a glowing and superb tapestry. The plant now covers the whole space on the wall, and they are obliged every summer to cut off the extremities of the leading shoots many times.”—*Revue Horticole*.

DOMESTIC NOTICES.

HEDGES OF THE THREE-THORNED ACACIA.—The Thorny Acacia (*Gleditsia triacanthus*) has been recommended to me for a hedge. What is your opinion of it? I can procure seeds of it in abundance, and I understand they will produce a hedge much more quickly than the Hawthorn. *Yours, S. M. Cincinnati, O., 1846.*

We cannot recommend the Three-thorned Acacia, where a really good and permanent hedge is desired. It grows very rapidly, and its foliage is very ornamental; but its habit is so coarse, and its growth so rampant, that it is almost impossible to keep it within due bounds, and form it into a really compact hedge. If only a loose and picturesque barrier is desired by our correspondent, then it will do perfectly well. But if he desires a compact and durable hedge, he had better employ the Buckthorn, or some of our native thorns. Our friend, the late Judge Buel, was quite partial to this plant, and strongly recommended it for hedges. By his persuasion mainly, we planted about 600 feet, eight or ten years ago, in excellent soil. The hedge is a flourishing one, but neither trimming, shearing nor plashing, succeeded in making a close and satisfactory hedge.—ED.

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THE LENOIR AND THE HERBEMONT GRAPES.—In your "Fruits and Fruit Trees," you do not describe the Herbemont Grape. Is this because you suppose it synonymous with the Lenoir? I obtained from Mr. Herbemont both these varieties, and always, till this season, felt certain they were not the same. I still incline to this opinion. But one of my vine-dressers, who has grown both for seven years, believes them the same. I have always supposed the Lenoir made double the wood of the Herbemont, and produced the most compact bunch of grapes. Can the Lenoir be a native? It is as hardy as the Winter Grape (Frost Grape), and as a table grape hardly to be surpassed by any foreign variety. The fruit of the two (if they are two) is of equal quality. I have thought the Lenoir wine inferior to the Herbemont. *N. Longworth, Cincinnati, O.*

REMARKS.—We supposed these two grapes identical, when we wrote our work on Fruits. Both these sorts are still very rare, indeed are scarcely known in our collections at the east; and we have yet had no very good opportunity of comparing them, but hope to do so the coming September. Since our last number, we have tasted a bottle of the Herbemont wine from Mr. Longworth. It possesses a very delicious bouquet, and high and peculiar flavor, and was pronounced, by a friend who is a connoisseur, to be a wine of very high character.—ED.

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COAL TAR.—We have recommended the coal of the gas works as an application to the stems of fruit trees, near the ground, in order to prevent mice from girdling them in winter. We observe, in the *Ohio Cultivator*, that a correspondent says,

he applied it to some trees in a young peach orchard, and it destroyed the trees.

Now we have seen this coal tar applied to at least 500 trees for three successive winters, and with the most satisfactory results. In England it is largely used in parks and preserves, upon all kinds of small shrubs, to protect them against the domestic hare, and we have never heard a complaint.

It is therefore very evident, either that the correspondent in question did not use tar from the gas works, but some stronger kind of tar, or that he used it in an inordinate quantity. The coal tar of some of the iron manufactories is very strong; either it or common tar, if very liberally used, would cause the death of tender young trees. But the gas works tar is thin, and but little of it will adhere to the bark at a single application. Where this cannot be used, we have known common tar to be applied with the same good results, after being mixed with one third lard.

There are always some experimenters who fall from thinking "if a little of a thing is good, more must be better." Hundreds of cultivators in this country burnt up their crops with guano, last season, by applying too much, and therefore forever after have foresworn this manure.

So too with the mixture of salt and saltpetre, recommended not long ago in the agricultural journals as a fertilizer for the peach tree. A writer, in the Transactions of the Cincinnati Horticultural Society, who gives his experience with it, in an orchard of four hundred sickly trees, says, after applying it, in the course of a few months the trees gave evidence of renewed life. He adds in a note, "a number of individuals in the vicinity of this city, having fine young orchards, destroyed many of their trees, by applying the remedy too freely."

Neither coal tar, nor guano, nor saltpetre, nor, in short, any thing else that is a powerful agent, can be used with the prodigality of air and water. Unless people can use them with some judgment, they had better not meddle with them. A burnt child dreads the fire, while a Humboldt finds in this element the moving cause of life, beauty and order, in the whole material universe.

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KNIGHT'S SWEET CURRANT.—This variety has borne fruit with us, and we observed a dozen strong plants, well laden with fruit in the well stocked nursery of Mr. James Wilson, Albany.

It is much less acid than the common Red or the Red Dutch Currant. Mr. Wilson considers it a great acquisition. Mr. W., in company with us, compared it in flavor with different varieties then in bearing, and we decided, that as regarded its flavor, it very closely resembles the *White Dutch* currant, being just about as acid as that variety, which is the most agreeable in point of flavor of all currants. The colour is a paler red than the Red Dutch

There are many who have supposed from its name, that this is positively a *sweet currant*. On trial, it proves to be only comparatively so, being in fact only less acid than the common Red Currant.

Myatt's Victoria has fruited this season, and is a large and excellent sort.

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THE MADELEINE PEAR.—Dear Sir: The Madeleine Pear is now in perfection with me. It has fruited for two years past; but I am obliged to say that generally it does not ripen well. It is apt to rot at the core. Is this a defect common to the variety? *J. W. Baltimore, July 14th.*

The Madeleine, and we may add, almost all other pears, *must be ripened in the house*. If left to ripen on the tree, they have little or no flavor, and soon decay. If picked as soon as they are fully grown, begin to colour well, and part readily from the tree, they are melting, juicy, high flavored, and delicious. We cannot too often urge this upon the attention of all novices in the pear culture. When once they have made the trial, they will never again think of allowing pears to ripen on the tree.—Ed.

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CENTURY PLANTS IN BLOOM.—We have paid a visit to a specimen of the *Agave americana*, now being exhibited at the conservatory of Messrs. Dunlap and Thompson, Broadway, New-York. It is not yet in full bloom, and will present an interesting appearance in about a fortnight.

We learn that this plant, and a companion to it now shown at Boston, have just arrived from Jamaica, whence they were brought by an enterprising gentleman, formerly of Northampton, Mass. He is at least determined that the present age shall not be ignorant of the appearance of the renowned Century Plant; since, besides these two in our principal cities, he has himself sailed with two more to Europe.

The Agave disappoints most of its visitors, who expect great beauty in the individual blossoms, which have very little. The fact is, this plant is always shown under a disadvantage of a too cramped apartment—some green-house or exhibition room.

It ought, when it begins to flower, to be planted out in a fine lawn. There, its gigantic height, and its truly noble proportions would strike every beholder, and it would be universally admired. A plant that throws up a flower stem like a tree, thirty feet high, with branches disposed with wonderful symmetry, and thousands of blossoms, can never be seen to advantage, except upon a large open lawn.

The idea that the Agave blooms but once in a century is long ago exploded. In its native country it blossoms at ten to twenty years old. In our green-houses, want of space and want of heat often retard its flowering three times this period.

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CHERRIES IN WESTERN N. Y.—At a recent exhibition of the Horticultural Society, at Rochester, about twenty-five different varieties of cherries were shown. A fruit grower from the vicinity of New-Haven, who was there at the time, says that

he has never seen such finely grown fruit, as were most of the specimens.

The leading and almost only kinds in the markets at Rochester, are, the Black Tartarian, Black Heart, Bigarreau, and Black Bigarreau; with the common Morello, *ad libitum*.

Downer's Late, Sparhawk's Honey, and American Amber, are now (July 4), in perfection, but they are not cultivated in sufficient quantities to appear in the baskets of the fruit dealers.

The late heavy rains have done much damage to some of the varieties, among which are the Black and Napoleon Bigarreaux. In many instances, all the fruit on thrifty and heavily laden trees, has entirely decayed, in from 12 to 24 hours.

On the sandy plains just north of the city, the cherry-trees have been, this summer, infested with Rose bugs, in great numbers, to the inconvenience and loss of the owners of the trees. These insects prefer the *parenchyma* of the leaves upon which they feed, whereby the fruit is much injured, or destroyed for want of proper nourishment. In some cases, however, they bite or puncture all the cherries. I have violently shaken a small tree, when so many of these bugs would drop, as literally to cover the ground. *J. W. Bissell, Rochester, N. Y., July 7, 1846.*

NOTE ON THE ROSE BUG.—In loose sandy soils the *Rose bug* is often a serious annoyance to the cultivator. It finds an easy access, and a warm and genial home in such soils, while it propagates but slowly in heavy soils. We understand from a friend, who has suffered greatly in his garden by Rose bugs, that for two years past, he has ploughed or turned up the surface of the soil at the approach of winter, leaving it as loose and as much exposed as possible to the action of the frost, since which he has been but little troubled by them. The frost destroys them in a larva state.—Ed.

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MANURES: NATURE'S RECIPROCITY SYSTEM.—Mr. Downing: The indefatigable Liebig, after his searching analyses into the nature and wants of vegetables, has arrived, it seems, at the conclusion, that, although other substances will be occasionally beneficial, yet we must resort to the *Barn-yard* for the only substance which contains all the elements that plants require!

To my mind, there is something satisfactory in being brought back, after a tour of impatient search for fertilizers, to the simple usage of the earliest agriculturists, and there is a moral lesson taught by this result, which makes us admire, as well as rely on the wise and beneficent laws of the Creator. He has so ordered it that the animals, and the land which sustains them, shall not only be mutually necessary and beneficial to each other, but *all-sufficient*; that when he decreed that man should live "by the sweat of his brow," and to struggle with "thorns and thistles," he provided not only the most powerful aid at the threshold of every culturist, but a substance which would have been a nuisance if it had been useless.

The pursuit of the natural sciences often conducts us to positions, whence we can "look through nature, up to nature's God," and it adds a charm to the fascinations of country life, that it affords us

the best opportunities for the cultivation of those serences. *Enclp.*

THE SWEET MONTMORENCY CHERRY.—Dear Sir: I send you, by Adams & Co's Express, this day, a box of my seedling cherry, "Sweet Montmorency." In this vicinity, this has been a very unfavorable season for most kinds of fruit. What was left on the trees after the late frosts, which injured the young fruit, the birds and the rains have for the most part, destroyed. This is not the case with this variety, owing to the lateness of its ripening.

We consider it worthy of more general cultivation, for these reasons: 1st, it comes after most cherries are gone. 2d, it is a sure bearer; having *always* given a good crop, from the first year of bearing, (which was about 1836.) It is also but little subject to the rot from wet, and does not crack.

3d. It is of excellent quality, and soon becomes a great favorite with those who have eaten it, and although the size is small, yet those who have once eaten the fruit, inquire for it again, and all that could be spared has been sold at prices higher than the usual rate.

My object now in sending it you, is, that in the forth-coming edition of your work on Fruits, you may be able to state some facts regarding it, of importance, regarding the time of ripening. Ten days since it was coloured, and a stranger to its qualities might think it ripe, and gather and pronounce it worthless, from the fact that it is in that state quite bitter. It should remain on the tree till well coloured. In those sent you, will be found some not fully ripe, but the bitter has passed off. The fully ripe and coloured, will be found sweet,

rich, melting, and vinous. I say melting, as I am not partial to the firm cherries. The *Bigarreaus* are too hard for me. Respectfully yours, *John Fisk Allen, Salem, Mass., July 15, 1846.*

REMARKS.—This box of *Sweet Montmorency* cherries, from the original tree in Mr. Allen's garden, reached us safely. We gave a figure and description of this cherry, in *The Fruits and Fruit Trees of America*. It is a very distinct and very valuable cherry—indeed the best very late cherry for the dessert, that we have yet tasted. The tree is a thrifty, hardy grower, with the habit of a heart cherry. It is from ten days to a fortnight later than that most excellent sort, *Downer's Late*, and is therefore a most desirable variety even in small collections.—ED.

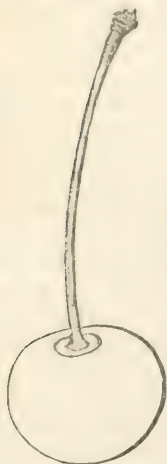


Fig. 29. *The Montmorency Cherry.*

EXPERIMENTS MADE TO TEST THE STRAWBERRY QUESTION.—I send you the results of some experiments I made two years ago, to satisfy myself re-

garding this subject. I now consider it settled, that some plants, in order to bear, must have male or staminate plants near them.

1st. I first tried six plants of Hovey's Seedling in the green-house, in January, before the bees could operate upon them. They blossomed very well, but did not set a fruit.

2d. Next the same number of plants, and on each side, plants of the Alpine variety were placed; the flowering was good, but not a fruit on Hovey's Seedling set.

3d. Then the Hovey's Seedling, and by the side of them, the Scarlet or Early Virginian was placed; every fruit blossom of the Hovey's Seedling swelled and ripened well.

The first experiment was tried alone the year before, but this was not considered satisfactory. The year succeeding, the three experiments were repeated in a vinery, 100 feet long, and at some distance from each other, and to my mind are perfectly satisfactory. *John Fisk Allen, Salem.*

NEW-JERSEY HORTICULTURAL SOCIETY.—This Society has issued a spirited circular, in connection with its schedule of premiums for this year, which will no doubt add greatly to its list of members. From this circular we learn that "the proportion of persons in New-Jersey engaged in Horticulture, compared with Massachusetts, is as six to one, and with New-York nearly three to one. Indeed, by her situation, New-Jersey seems intended for the garden and orchard of the great cities and towns to which her products are so easily sent. Her soil and climate are eminently adapted for the growth of horticultural produce, which already forms one of her principal sources of income, and is yet capable of great improvement and increase."

The great autumnal exhibition takes place at Princeton in September (day not yet fixed.) The list of prizes is a very liberal one, and we are confident, from the previous shows of the Society at Burlington, that it will be one of great interest. The following are the officers of the Society for 1846: Richard S. Field, Princeton, *President*; Rt. Rev. G. W. Doane, of Burlington, John S. Chambers, of Trenton, Hon. William Wright, of Newark, William White, of Lawrenceville, Roswell L. Colt, of Paterson, John S. Van Dyke, of Mercer, *Vice-Presidents*; Ira B. Underhill, of Burlington, *Treasurer*; Wm. W. King, of Burlington, *Recording Secretary*; Horace W. S. Cleveland, of Burlington, *Corresponding Secretary*.

THE STRAWBERRY QUESTION.—Regarding the Strawberry, I think the true policy is to grow, for a crop, only the pistillates, with just enough of the other to fertilize them; then we can have a certain and abundant yield. I have come to the conclusion that our best staminate produce but an imperfect crop; that only a portion of their blossoms set their fruit, and that most of them are worthless, except for fertilizers. With the aid of staminate as fertilizers, every fruit of a pistillate variety will be perfect, and every blossom a fruit. Following this mode, we may have this delicious fruit as easily and as plentifully as beans. Yours, *M. P. Wilder, Boston, July.*

EXCELLENT MODE OF SETTING GRAFTS.—Last spring, in a nursery in our vicinity, 110,000 apple grafts were made in the ordinary way, and *wound with tow*. Owing to a severe drouth, however, at the time of planting out, to subsequent heavy rains, or to some other cause, only 30,000 have succeeded. Simultaneously, my very first practical attempt at the interesting work was made, and with such comparatively brilliant results, that I am induced to whisper my triumph in your pomological ear.

Of apple grafts, I made 110 precisely; 96 are doing well. Of 400 pears, 360 are likewise thriving;

but in lieu of *tow* as binders, I applied strips—requiring breadth three-quarters of an inch generally—torn from sixpenny factory cotton cloth, which was brushed over on one side with grafting wax. Three yards of cloth, with four ounces of wax per yard, will suffice for 1000 two year old trees. If this is a slower process, it is the surest and best, I am convinced, take one season with another. And with the above result in view, do you not deem it the most economical? I attribute my failures more to poor roots than to poor workmanship, or to the inefficiency of these ligatures. *Sciolist. Syracuse.*

MASSACHUSETTS HORTICULTURAL SOCIETY.

MASSACHUSETTS HORTICULTURAL SOCIETY HALL,
Saturday, June 27th, 1846.

Adjourned Meeting.—The President in the chair.

Mr. BRECK, editor of the N. E. Farmer, announced to the Society that he was about to discontinue the paper, and to become interested in a new periodical, to be issued on the 1st of July, called "The Horticulturist," and as the N. E. Farmer had published gratuitously the reports of the Society from its commencement, he asked the favor that the official reports and doings of the Society might be furnished for publication in "The Horticulturist."

Mr. SAMUEL WALKER replied to the above in the following appropriate remarks:

Mr. President—In rising to respond to the request just made by my friend Breck, I feel somewhat embarrassed, lest the remarks I shall make may be misunderstood. I like old landmarks, old friends, the good old way, and the long published periodicals, which I have for many years received; they become a part of our existence, and when they are discontinued, it reminds of the parting forever with some esteemed and beloved friend. It was thus when the last number of Loudon's Gardener's Magazine was received—it is so with a notice of the discontinuance of the N. E. Farmer; but sir, waving all unnecessary indulgence of personal feeling, I can but say I am glad to perceive in the death of the Farmer, the birth of a Horticulturist. Sir, we have need of such a paper, indeed for many such publications, and if they are conducted on a *liberal* and *generous* principle, they will, they must, succeed. The advertising sheet of such a paper, ought and indeed must be open to all cultivators; it has been and ever will be fatal to any publication which shall adopt a different course.

Mr. W. then offered the following votes:

Voted, That we hail with pleasure the publication of the "Horticulturist," under the editorial care and direction of our able and distinguished member, A. J. DOWNING, Esq. The well known talents, perseverance and respectability of the publisher, Mr. LUTHER TUCKER, and the entire confidence which we have in our long tried and faithful friend and fellow laborer, Mr. JOSEPH BRECK, all combine to insure its usefulness and success, and enables us in advance to give it our unqualified approbation.

Voted, That the request of Mr. BRECK be complied with, and that he be regularly furnished with the official reports and doings of this Society for publication in the "Horticulturist."

Voted, That the thanks of the Society be presented to Jos. BRECK, Esq., editor of the N. E. Farmer, for the liberal and impartial manner with which he has for many years published the reports and doings of the Society, free of charge, and in particular for the disinterested and high minded course he has ever evinced, both in his editorial and private capacity, to advance the interests of our Institution.

The Society held an adjourned meeting July 11th, President WILDER in the chair.

Pamphlets on the "Cultivation of the Grape," and also on the "Character of the Strawberry plant," by Nicholas Longworth, Cincinnati, were received by the hand of Mr. Ernst, and a vote of thanks passed for the same.

The following persons were elected members:

Benjamin S. Loring, Kimball Gibson, Harvey D. Parker,

Henry Robbins, Theodore N. Hall, James M. Blainey, Cyrus W. Jones, B. C. White, Samuel A. Elliot and Geo. H. Gray, all of Boston.

Thomas Groom, D. S. Greenough and Franklin King, of Dorchester.

Stephen H. Cleveland, Freeman Fisher and Lewis Bullard, of Dedham.

J. W. Mandall, Henry S. Waldo, John Fassell and William Seaver, of Roxbury.

Lewis Davenport, Henry Liversage and Dorrance Davis, of Milton.

D. C. Baker, Lynn.

Jay Ambrose Wight, Chicago, Illinois, and Louis Van Houtte, Ghent, were elected corresponding members.

Attest, EBEN. WIGHT, *Rec. Secretary.*

Exhibition of Saturday, June 27, 1846.

IN consequence of the extreme wet weather and unpleasant morning, the show of flowers was rather meagre compared with last Saturday's exhibition. A few of our florists, however, were on hand, with their usual complement of flowers.

From Messrs. Winship, Prairie and other Roses in great variety, *Lychnis chalcidonica-plena*, *Clematis alpina*, *Campanulas*, *Veronias*, *Deutzia scabra*, *Aconitums*, *Spireas*, together with a great variety of other cut flowers.

From Parker Barnes, six pot plants, *Delphiniums*, *Campanulas*, *Ginerarias*, *Roses*, *fine Pansies*, and other cut flowers.

From William Quant, *Stephanotis floribundus*, a very splendid and highly fragrant stove creeper, with pure white flowers in large clusters, with foliage similar to the *Camelia*, but larger. Also beautiful specimens of *Mandevilla suaveolens* and *Tecoma jasminoides*, greenhouse creepers, and a plant of seedling *Cactus* from *C. ackermannii* (beautiful).

From Joseph Breck & Co., fifty *Anemones* (many of them fine) of various colours, *Paisley Pinks*, *Roses*, *Kalmias* (from the interior), *Martagon* and other *Lilies*, *Campanulas*, *Clematis alpina*, and cut flowers in great variety.

From J. L. Gardiner, by Daniel Crowley, a great variety of fine *Roses*, *Sweet Peas*, &c.

From Hovey & Co., a great variety of fine *Roses*, including eight varieties of *Prairie* and twelve varieties of *Moss*; also one very large and fine bouquet.

From J. L. L. Warren, a large fancy design, fifteen small bouquets, *White Water Lilies*, *Gladioli colvillii*, two varieties of *Digitalis*, three varieties of *Campanula media*, *Dianthus barbatus*, *Clematis alpina*, *Delphiniums*, *Roses*, and other cut flowers in abundance, making a fine display.

From Walker & Co., a magnificent fancy bouquet or design, of large dimensions, three bouquets, *Roses* in variety, *Dahlias* and cut flowers.

From Wm. Kenrick, by Miss Russel, one large circular bouquet, three small bouquets, and cut flowers.

From John A. Kenrick, a fine bloom each of *Magnolia macrophylla* and *longifolia*.

From Wm. Meller, a fine seedling and other *Geraniums*, *Paisley Pinks*, two bouquets and cut flowers.

From R. West, Salem, a fine fancy bouquet, large size, seedling *Geranium* (fine flower) and *Roses*.

For the Committee,

JOSEPH BRECK.

AWARD OF PREMIUMS.

For the best roses to Walker & Co., a gratuity of \$2 to Mr. West, and a gratuity by Jeremiah Sherman. The best bouquet to Miss Russell. A gratuity of \$3 to Wm. Quant, for a specimen of *Spiræa floribunda*, a new greenhouse variety of great merit.

One exhibition of pot plants, not worthy of premium. Exhibitors of plants would do well to bear in mind that pots taken up at a distance of room, and unless they are new or remarkably well grown specimens, they are not attractive.

DAVID HAZARDSTON, Ch'n.

FRUITS.—Grapes: The specimens presented by Mr. D. Hazardston, from the grapeery of J. P. Cushing, Esq. of Waretown, were large and highly coloured. The committee tasted the Black Hamburg, Muscat of Alexandria, Grizzly Frontignan, White Frontignan and White Sweetwater. All the berries were ripe and truly delicious. The Poona the committee did not taste. Mr. Wm. Quant exhibited six varieties from the grapeery of the Hon. T. H. Perkins of Brookline, viz. Golden Chasselas, Black Frankendale, Grizzly Frontignan, White Frontignan, Black Frontignan and Black St. Peters. The bunches were large, and the berries well coloured; they were not tasted by the committee.

From Thomas Motley jun. Esq., of Dedham, by Mr. John Galvin, specimens of Black Hamburg, White Chasselas and White Muscat.

John Fisk Allen, Esq., of Salem, twelve varieties, viz. Early Black July, Miller's Burgundy, Zinfandel, Early White Muscadine, Pimston's White Cluster, Black Hamburg, Red Chasselas, Variegated Chasselas, Grizzly Frontignan, Muscat of Alexandria, White Frontignan, Chasselas de Bar sur Aube.

Otis Johnson, Esq., of Lynn, Zinfandel and Black Hamburg. Mr. Johnson also presented a box of fine Black Tartarian Cherries, and three boxes of Hovey's Seedling Strawberries. These Strawberries, as also the specimens of Mr. J. last week, were large and fine.

Peaches: Fine specimens of Washington Peach by Mr. Allen of Salem.

By the Messrs. Winship of Brighton, a large dish of White Bigarreau Cherries. They also presented a seedling Cherry raised by Timothy Monroe, Esq., of Brighton—color and size good. Owing to the rain, the committee decline to give their opinion as regards its flavor.

Strawberries: J. T. Buckingham, Esq., Wood and Hovey Seedlings.

Mr. Isaac Fay, a large basket of his Seedling—the berries were large and well colored.

Messrs. Hovey & Co. presented several baskets of their Hovey's Seedling and Boston Pine, also of the Deepford Pine. The Boston Pine fully sustains its good character.

Mr. J. L. F. Warren, Brighton, Red and White Wood, Warren's Seedling, Hudson, Willey's Seedling, Jenney's Seedling, and Bishop's Orange.

Mr. George Walsh, four boxes of Bigarreau Savoy Cherries—the specimens were very handsome.

Mr. George Merriam, five boxes of Black Tartarian Cherries.

Mr. John A. Kenrick of Newton, fine Black Tartarian Cherries.

Mr. J. G. Thurston of Leominster, large white Gooseberries.

For the Committee, S. WALKER, Ch'n.

VEGETABLES.—A peck of early Potatoes from A. D. Williams.

From F. W. Macondry, a basket of early Potatoes.

From A. D. Williams, three heads of Cabbage, two bunches of Carrots, and three heads of Lettuce.

From J. Hovey, Roxbury, six heads of Lettuce.

From Wm. Quant, one dish of Tomatoes.

A. D. WILLIAMS JUN., Ch'n.

Exhibition of Saturday, July 4th, 1846.

FLOWERS.—On account of its being a holiday, and amateurs and florists otherwise engaged, the exhibition of flowers was rather small.

From Joseph Breck & Co., *Delphinium barlowii*, fourteen varieties of *Delphinium grandiflora*, including double and single varieties of different colors and shades; *Delphinium suensis plena*, five varieties of *Delphinium elatum*, fine double Anemones, six varieties of double Gillyflowers; *Campanulas*, *Spiræa*, *Iberis*, English Iris in variety, *Digitalis aurea*, *Penstemon digitalis*; *Lychnis chalcedonica plena*,

White and Orange Lilies, *Veronica variegata* and *Siberica*, and other cut flowers.

From Parker Barnes, a very fine display, among which were *Campanula media*, *Dianthus barbata*, *Pyrethrum parthenium*, *Penstemon digitalis*, *Veronica*, *Sedibosa atropurpurea*, *Beris*, *Roses*, *Primulas*, *Delphiniums*, *Pinks*, *Danias*, *Viscagallia*, *Verbenas*, *Lamæra*, &c.

From William Meller, 2 fine bouquets, *Roses*, a variety of cut flowers, and fine branch of *Heliotrope*.

From William B. Richards, *White Lilies*, *Campanula media*, *Delphiniums*, *Digitalis*, *Papavers*, *Roses*, *Iberis*, *Aconitum*, *Petunias*, with other cut flowers.

From William Quant, six pot plants, viz.: two fine Double Balsams, *Achimenes*, *Fuchsias*, *Vinca alba*, and *Cactus*.

From J. L. Gardener, by Daniel Crowley, two plants of the *Veronica speciosa*.

For the Committee, JOSEPH BRECK, Ch'n.

FRUITS.—Mr. Jenny, of New Bedford, presented two boxes and a large dish of his seedling Strawberry, called "Jenny's Seedling." The berries were large, (considering they were the last of the crop,) and notwithstanding the season has been very unfavorable for the ripening of the Strawberries, still the flavor was extremely rich; we class it among the best. In justice to Mr. Jenny and ourselves, we must add that his former specimens came to hand in poor order, they having been gathered when the fruit was wet.

Otis Johnson, of Lynn, four boxes of extra fine specimens of Black Tartarian Cherries.

William Quant, two very superior green fleshed Persian Melons—the flavor was delicious.

George Walsh, Bigarreau Savoy, (?) and also two seedling Cherries. Seedling No. 1, sweet and good; No. 2, firm and fair.

Josiah Richardson, Cambridgeport, good specimens of Hovey's Seedling Strawberries.

Mr. W. W. Wheelton presented a ripe Melon.

Frederick Tudor, Nahant, a large basket of Hovey's Seedling Strawberries.

Cheever Newhall, a large basket of fine specimens of Knevet's Giant Raspberries.

Messrs. Winship, Fastolf, and another variety, supposed to be the Franconia, Raspberry.

Mr. Fay presented two baskets of his Seedling Strawberry; the berries were large, but they lacked in flavor.

In our report of last week we omitted to report specimens of the Black Hamburg Grape, by Mr. Wm. Quant.

For the Committee, S. WALKER, Ch'n.

Exhibition of Saturday, July 11th, 1846.

FLOWERS.—The excessive heat of the past two days cut off the supply of flowers, and but a few fine specimens were found on the stands.

From Messrs. Winship, a superb branch of the *Prairie Rose*, (perpetual pink) containing 26 full blown flowers, a variety of fine cut flowers, *Yucca filamentosa*, *Spiræas*, &c. &c. &c.

From Hovey & Co., six pot plants of *Gloxinias*, var. *rubra*, *macrophylla variegata*, cartoni, two seedlings and *tubiflora*; also cut flowers of *Rocket Larkspur*, *Potentilla murrayana*, and *barrattii*, *Aquilegia skimmeri*, and a cluster of superb *Prairie Rose*.

From Joseph Breck & Co., a fine display of cut flowers, among them fine *Anemones*, *Carnations*, *Picotees*, *Pinks*, *Delphiniums*, in var.; *Lilies* in var.; *Phloxes*, *Verbenas*, &c.

From J. L. F. Warren one large bouquet, two vase bouquets, two pyramidal bouquets, one bouquet composed of *Viola tricolor*, and seventeen hand bouquets: *Spiræa blanda*, *Rosea*, *Grandiflora*; *Campanulas*, *Delphiniums* in variety, *Arbution*, *Cobea scandens*, *Gillyflower*, *Seedling Picotees* and *Carnations*, *Pond Lilies*, *Clematis*, *Marigolds*, &c. &c.

From Wm. Kenrick, by Miss Russell, one large bouquet, a basket of flowers, *Spiræa grandiflora*, &c.

From Richard West, Salem, by J. Sheehan, a fanciful design, for which the committee awarded a gratuity of \$1.

From Walker & Co., a fine display of cut flowers, *Spiræa grandiflora*, *Delphinium barlowii*, and others, *Roses*, *Stocks*, &c. &c. and the following *Dahlias*, some of which were very good specimens for the season, viz: *Lady Sale*, *Stanfield Rival*, *Grand Tournament*, *Prince of Wales*, *Lady Antrobus*, *A. Hofer*, *Nonpareil*, *Lady Washington*, *Nihil*, *Mrs. Shelley*, *Napoleon*, and others.

From Wm. B. Richards, Dedham, *Delphiniums*, *Larkspurs*, *Dahlias*, *Picotees*, *Spiræas*, &c. &c.

From O. H. Mathers, by Thomas Needham, Brighton

Dahlias, Verbenas, Roses, Gillyflowers, Delphiniums in variety, and other cut flowers.

From Wm. Meller, Roxbury, a fine display of Seedling Picotees, comprising about 100 varieties, some of them were very fine; good Dahlias; two bouquets; fine Stocks; Delphiniums in var., Seedling Pinks, and a variety of other cut flowers.

From James Nugent, two bouquets, China Pinks, Phloxes, Balsams, &c. &c.

From John Hovey, fine Carnations, Dahlias, cut flowers in var., and three bouquets.

From Franklin Morgan, Palmer, Mass., a sample from a field of 30 acres of meadow grass and herds grass, manured with plaster and ashes, some of which measured over six feet in length.

The Committee award to Messrs. Hovey & Co., for six plants of Gloxinias, a gratuity of \$2; to Mr. R. West, for a design \$1; and to Mr. Warren, for bouquets, a gratuity of \$1.

For the Committee, H. W. DUTTON.

FRUITS.—Otis Johnson, of Lynn, very fine specimens of Black Tartarian and Bigarreau Napoleon Cherries.

J. F. Allen, Salem, fine varieties of Peaches; Nectarines; Figs; Grapes, viz.: Black Hamburg, Wilmot's New, Zinfandel, Black Portugal, Chasselas Bar sur Aub.

Hovey & Co., Fastolf Raspberries.

Cheever Newhall, of Dorchester, two boxes of Knevett's Giant, and branches of the Nottingham Raspberries.

E. E. Bradshaw, Charlestown, five boxes of Franconia Raspberries and two boxes of Gooseberries.

J. L. L. F. Warren, Brighton, Fastolf and Franconia Raspberries; Honey Heart and Warren's Transparent Cherries.

S. & G. Hyde, two boxes seedling Cherries, and a variety for a name—probably the Black Tartarian.

Jonathan French, Roxbury; Gooseberries.

Alex. McLennan, two boxes of fine Gooseberries.

John Hovey, Gooseberries.

Geo. Walsh, specimens of two seedling cherries, Nos. 1 and 2.

Aaron D. Williams, Roxbury, 2 boxes red, and 2 boxes white cherries, 1 box Elkhorn cherries, 2 boxes Downer's red, 3 boxes Franconia Raspberries.

J. Stickney, seedling cherries.

Messrs. Winship, Franconia Raspberries.

John Gordon, Brighton, 4 boxes of Gooseberries with names.

For the Committee,

S. WALKER, Ch'n.

VEGETABLES.—From A. D. Williams, Blood Beet, Turnip Rooted Beet, Cabbages, Carrots, potatoes.

From J. H. Perkins, by William Quant, six heads Royal Cape Lettuce, one doz. Tomatoes.

From A. McLennan, six heads Royal Cape Lettuce.

For the Committee.

A. D. WILLIAMS, Chairman.

Exhibition of Saturday, July 18th, 1846.

FLOWERS.—From M. P. Wilder, President of the Society, two very large specimens of *Lilium lancifolium album*; also three seedlings, very nearly like *L. speciosum* or *rubrum*, but the white or ground color better defined. Six pots new Gloxinias, viz.: maxima alba, cartoni, grandiflora, menziesii, &c. *Gladiolus christianus*, a new variety of great beauty, color deep scarlet with white stripe. Also 6 pots of *Achimenes*; 16 pots in all.

Soon after the discovery of these new Lilies by Dr. V. Siebold, in 1837, Mr. Wilder obtained them, and with his usual zeal commenced hybridizing. From the seed thus obtained, the superb specimens exhibited last season and on the present occasion, were produced. We learn from Mr. Wilder, that he has now quite a number which will soon be in bloom, and that by next year some hundreds will show flowers. He intends then to display them in a bed, the magnificence of which can hardly be conceived. One thing only remains to give these superb flowers a crowning excellence, and that is that they may grow hardy, of which he has great hope.

From Alexander McLennan, a circular bouquet and fine double Balsams.

From Walker & Co., Carnations and other Pinks in great variety, *Cimicifuga foetida*, *Spiraea palmata*, Dahlias, double Gillyflowers, *Lythrum salicaria*, Phloxes, Roses, Iberis in variety, and a variety of other cut flowers.

From W. B. Richards, fine Dahlias.

From Wm. Meller, a splendid display of seedling Carnations and Picotee Pinks, some of them fine, two bouquets, Dahlias, &c.

From J. L. Gardiner, by Daniel Crowley, a fine display of Double Hollyhocks, some of them very beautiful.

From Parker Barnes, fine Dahlias and Roses in variety; double Dahlias, Pinks, Delphiniums, *Spiraea*, Verbenas, *Phlox Drummondii*, Iberis; two fine specimens of *Agapanthus umbellatus* and other cut flowers.

From Messrs. Winship, 3 magnificent specimens of *Yucca filamentosa* and gloriosa, Roses, *Cimicifuga foetida*, and other cut flowers.

From John Hovey, one large and four small bouquets done up in fine style.

From B. West, by J. Sheehan, one large circular bouquet.

From Joseph Breck & Co., *Phlox picta*, alba keemesina, Van Houtii, Charles, *mechantea speciosa*, *Artabanus*, *wheelerii*, *shepardii*, *nymphaea alba*, *cordata speciosa*, *Lilium longiflorum*, *plena candida*, *martagon*, *superbum*, *canadensis*, and *chalcadonica*; *Catananche cœrulea*, Iberis 4 var., *Aconitum variegatum*, *Spiraea palmata*, Delphiniums, Double Gillyflowers, *Phlox Drummondii*, Perennial Peas, *Fumaria*, Carnation and Picotee pinks in great variety, nine bouquets, and cut flowers.

From J. S. Cabot, *Gaillardia picta*, coccinea, coronata and sanguinea; *Clematis sieboldii* and *hendersonia*; *Phlox bicolor*, *donkelerii*, alba keemesina, Nimrod, Enclos and Charles; *Telekia speciosa*, *Delphinium grandiflora*, *Lythrum roseum*, *Lychnis dioica*, *Lychnis flore pleno alba*, *Spigelia Marylandica*, and other cut flowers, embracing those new and rare.

From Dr. T. M. Harris, *Phlox picta*.

From O. H. Mather, Dahlias, *Phlox Van Houtii*, Verbenas, *Phlox Drummondii*, *Aconitums*, Iberis and other cut flowers.

From James M. Richardson, gardener to Capt. G. Lee, a fine White Seedling Verbenas.

From Wm. Kenrick, by Miss Russell, one large and six small bouquets.

From Hovey & Co. fine Carnation and Picotee Pinks in great variety; a beautiful specimen of *Passiflora fragrans*, (new and fine,) also *Thunbergia crysops*, very beautiful; *Ipomœa laevis*.

From J. L. L. F. Warren, ten bouquets, a fine display of Seedling Pinks and Carnations, some of them beautiful: *Spiraea palmata* and variegata; *Aconitum variegatum*, a fine specimen of *Gladiolus gandavensis*, Dahlias, Water Lilies, *Antirrhinum*, Delphiniums, and other cut flowers.

From Edward Lewis, *Lychnis chalcadonica plena alba*, Double Hollyhocks, *Aconitum variegatum* and other cut flowers.

Award of Premiums on Bouquets, Pot Plants, and Hollyhocks. To J. Sheehan, first premium of \$2 for best bouquet.

To Wm. Kenrick, second do. \$1.

To M. P. Wilder, President of the Society, for a fine display of Gloxinias and Japan Lilies, and a plant of *Gladiolus christianus*, a new and beautiful variety, a gratuity of \$3. For Hollyhocks, the first premium of \$3, for the best display, to Daniel Crowley.

For the Committee,

JOSEPH BRECK, Ch'n.

Award of Premiums on Carnation and Picotee Pinks. Daniel Crowley, Wm. Doyle and Dean Paine, Judges.

To J. L. L. F. Warren, the first Premium of \$5.

To Joseph Breck & Co. the second Premium of \$4.

To William Meller, for the best display, \$3.

To J. L. L. F. Warren, a gratuity of \$2 for fine seedlings.

DAN'L CROWLEY, Chairman.

FRUITS.—Seedling Cherries. J. F. Allen, of Salem, and J. L. L. F. Warren, of Brighton, each presented the Committee with specimens, viz.: By Mr. Allen, his Cherry called the Sweet Montmorency—this variety may be classed with the best, and is deserving of extensive cultivation; as a late cherry, it probably has not an equal as it regards flavor—it should not be gathered until the fruit becomes red and fully ripe. The Honey Heart, by Mr. Warren, is high flavored, sprightly, and may be ranked with our good varieties. The Transparent, by Mr. Warren, is good, but the size is rather small.

Currants.—Otis Johnson, of Lynn, and A. D. Williams, of Roxbury, each presented four boxes of very fine currants; also a box of fine white currants, by Mr. Dexter, of Jamaica Plains, Roxbury.

F. W. Macondry, of Dorchester. Sharp's Seedling Peaches, and one variety without name; also Figs.

Alexander McLean, of Watertown, some very fine Gooseberries, and a Persian Melon.

Pears.—Avery Jackson, by J. S. Cudde, of Salem, and Chapman's Early, by Messrs. Hovey, they are both unworthy competitors, at least in this part of the country.

E. E. Hartsman, of Charlestown, Franconia Raspberries. *J. L. L. Warren*, of Brighton, Franconia Raspberries, and Seedling Cherries, viz.: Warren's Honey Heart, and Warren's Transparent.

J. F. Allen, of Salem, four boxes of his Seedling Sweet Montmorency Cherries, fine and delicious; also Franconia Raspberries; six varieties of Peaches, viz.: Early Crawford, Kendrick's Orange, Grosse Mignonne, New Jersey

Grosse Mignonne, Tippecanoe (?) and Noble's. *Nectarine*, *Vivette* Hative, also six varieties of Grapes, viz.: Wilmet's New Black Hamburg, berries large, highly colored, and fine flavor; White Frontignan, Black Hamburg, Zinfandel, Black Prolific, and Chasselas de Bon son Amos.

For the Committee, S. WALKER, Chairman.

VEGETABLES.—From A. D. Williams, T. matoes, Carrots and Potatoes.

From O. H. Mather, by Thomas Needham, Cucumbers, CANTALOUPE.

From Jeremiah Macarty, 3 heads of Cauliflowers.

For the Committee, A. D. WILLIAMS, CHAIRMAN.

PENNSYLVANIA HORTICULTURAL SOCIETY.

THE stated meeting of this Society was held in the Chinese Saloon, Philadelphia, July 21, 1846. The President in the Chair.

Reports of the Standing Committees.—The Committee for awarding premiums on fruit, for the intermediate meeting, July 7th, respectfully report, that although no premiums are proposed by the schedule for this occasion, yet as several interesting specimens are exhibited, they have thought expedient to award special premiums of one dollar each for the following objects, viz.: for a specimen of Madeleine Pears, and also for a display of Pears, to John Austin, gardener to J. B. Baxter. For the best Gooseberries, the Alton Tower, to Mr. Duchet, gardener to General Patterson. For Gooseberries, to John Austin; for ditto, to Andrew Patton, gardener to Mrs. Kohne. For the best Red Currants, to Adam Ober. For Red Currants, for Black Currants, and for White Currants, to Andrew Patton. For Raspberries, to the same; and for a display of Red, Black, and White Currants, to Samuel Cooper, a premium of two dollars. The Committee on Vegetables award special premiums of one dollar each, to Andrew Patton, gardener to Mrs. Kohne, for a fine display of Tomatoes, and to John Austin, gardener to J. B. Baxter, for a display of Beets.

For objects on the present occasion, by the Committee on Plants and Flowers. For the most interesting collection of Plants in pots, to James Bisset, gardener to James Dundas. For the best display of indigenous plants, to Robert Kilvington. For the best Bouquet, and for the best do. formed of indigenous flowers, to Archibald Henderson, gardener to W. Chancellor. For the next best Bouquet, to William Hall, gardener to Caleb Cope. And special premiums of one dollar each, to Archibald Henderson, for display of indigenous flowers; and to Anthony Felten and Archibald Henderson, for Bouquets.

By the Committee on Fruits.—For the best Raspberries, the American Red, to Philip Gallagher, gardener to Miss Gratz. For the next best, same var., to Andrew Patton. For the best Red Currants, to Archibald Henderson. For the best Black Currants, to Philip Gallagher. A special premium of one dollar for Black Currants, to Andrew Patton. For the best Apricots, the Moor Park, to William Johns. For the next best, the same variety, to James Bisset, gardener to Jas. Dundas. And the following special premiums, one of five dollars, to Isaac B. Baxter, for a seedling Apricot, presumed to be the finest exhibited to the Society; one of two dollars, to Dr. J. W. Thomson, of Wilmington, Delaware, for excellent Moor Park Apricots, not sufficient for competition; one of one dollar to Andrew Patton, for Moor Park Apricots; one of two dollars to Uriah Hunt, for a very superior Plum, name of the variety lost; it was a very large, red plum, nearly round; one of one dollar, to Patrick Gallagher, for very large Figs—Brunswick variety. Five dollars to W. Westcott, gardener to J. Cowperthwaite, for very fine Black Hamburg Grapes, raised under glass. Three dollars to Wm. Hall, gardener to C. Cope, for superb Black Hamburg Grapes. One dollar to James Bisset, for Cannon Hall Muscat Grapes. For the best named variety of Apples, the Early Harvest, to Thomas Hancock, Burlington.

By the Committee on Vegetables.—For the most interesting display of Vegetables, to Anthony Felten; and for the next most interesting display, to John Austin, gardener to J. B. Baxter.

The Committee of Finance reported, that they had examined the Treasurer's statement of accounts, and found it correct, and in correspondence with the vouchers.

The Committee to superintend Exhibitions reported, that they had fixed on the 16th, 17th, and 18th days of September, as the time for holding the Autumnal Exhibition, and there were five vacancies in the Committee, which were filled by the President.

Dr. Wm. D. Brinkle submitted a series of Resolutions expressing the deep regret of the Society at the loss sustained in the death of its late Vice President, Joseph Price, Esq., who died on the 30th, ult., in the 78th year of his age—the testimony of this Society to his great worth and amiability of character, and the loving zeal he always manifested in its prosperity. These resolutions were unanimously adopted, and the Recording Secretary ordered to transmit a copy of them to the nearest relative of the deceased.

The Recording Secretary stated, that he had received a communication from the Editor of the *Horticulturist*; he requested that he might be furnished with the official reports of the proceedings of the Society for publication in that periodical. When on motion, *Ordered*, That the committee of publication comply with such request, and furnish, from time to time, the reports.

Objects exhibited at the intermediate meeting, July 7th. The display was unusually fine, as may be inferred from the reports of committees on awarding premiums.

On the present occasion, *Plants*, shown by James Bisset, from James Dundas's collection, consisted of a number of species of Achimenes, very handsome, and other plants.

By Wm. Hall, gardener to C. Cope—Achimenes, grandiflora and longiflora, grown in suspended wire baskets, filled with bats, chips, &c., similar to the Orchideous plants, which presented a most beautiful and novel appearance, covered as they were with their handsome flowers.

By Ritchie and Dick—*Banksia serrulata*, in flower, and pots of seedling Lilies, raised from the seed of *L. superbum*, by Mr. P. Wilder, of Boston.

Bouquets.—A number of beautiful baskets, &c., by Archibald Henderson, Wm. Hall, and others.

FRUIT.—*Apricots*, by Wm. Johns; the Moorpark, by Isaac B. Baxter, a superior seedling, shown for the first time; by Dr. J. W. Thomson, splendid Moorpark, by James Bisset, fine Moorpark; by Andrew Patton, gardener to Mrs. Kohne, Moorpark; by Wm. B. Potts, the Roman; by Thomas Hancock, Pêche and Breda.

Raspberries, by P. Gallagher, gardener to Miss Gratz; by Andrew Patton; by Dr. W. D. Brinkle, Orange Raspberry, a seedling from Dyack's seedling, grown by himself.

Currants, by A. Henderson, Red; by P. Gallagher, Black; by Andrew Patton, Black.

Plums, by Uriah Hunt, a large round red variety, name not known; by Thomas Hancock, Yellow Gage; by George Fox, Yellow Gage.

Apples, by Thomas Hancock—Red Astrachan, Woolman's Harvest, Early Strawberry, Large Yellow Bough, and Early Harvest.

Pears, by Thomas Hancock; Early Catharine, by P. Gallagher and others.

Figs, by P. Gallagher—Brunswick, very large size.

Grapes, by Caleb Cope—Black Hamburg, raised under glass—berries very large—flavor excellent; by W. Westcott, gardener to J. Cowperthwaite, Black Hamburg, bunches very large and fine; by James Bisset, the Cannon Hall Muscat and Royal Muscadine.

Vegetables, by Anthony Felten, a very large and fine collection; by John Austin, gardener to Isaac B. Baxter, a creditable display. THOS. P. JAMES, Rec. Sec.



FIG. 39. See page 108.



FIG. 31. See page 108.

THE
Horticulturist,
AND
THE

JOURNAL OF RURAL ART AND RURAL TASTE.

VOL. I.

SEPTEMBER, 1846.

No. 3.

THE SIMPLE RURAL COTTAGE, or the *Working Man's Cottage*, deserves some serious consideration, and we wish to call the attention of our readers to it at this moment. The pretty suburban cottage, and the ornamental villa, are no longer vague and rudimentary ideas in the minds of our people. The last five years have produced in the environs of all our principal towns, in the Eastern and Middle States, some specimens of tasteful dwellings of this class, that would be considered beautiful examples of rural architecture in any part of the world. Our attention has been called to at least a dozen examples lately, of rural edifices, altogether charming and in the best taste.

In some parts of the country, the inhabitants of the suburbs of towns appear, indeed, almost to have a mania on the subject of ornamental cottages. Weary of the unfitness and the uncouthness of the previous models, and inspired with some notions of rural gothic, they have seized it with a kind of frenzy, and carpenters, distracted with *verge boards* and *gables*, have, in some cases, made sad work of the picturesque. Here and there we see a really good and well proportioned ornamental dwelling. But almost in the immediate neighborhood of it, soon

spring up tasteless and meagre imitations, the absurdity of whose effect borders upon a caricature.

Notwithstanding this deplorably bad taste, rural architecture is making a progress in the United States that is really wonderful. Among the many failures in cottages, there are some very successful attempts, and every rural dwelling, really well designed and executed, has a strong and positive effect upon the good taste of the whole country.

There is, perhaps, a more intuitive judgment—we mean a natural and instinctive one—in the popular mind, regarding architecture, than any other one of the fine arts. We have known many men, who could not themselves design a good common gate, who yet felt truly, and at a glance, the beauty of a well-proportioned and tasteful house, and the deformity of one whose proportions and details were bad. Why then are there so many failures in building ornamental cottages?

We imagine the answer to this, lies plainly in the fact that the most erroneous notions prevail respecting the proper use of DECORATION in rural architecture.

It is the most common belief and practice, with those whose taste is merely bor-

rowed, and not founded upon any clearly defined principles, that it is only necessary to adopt the *ornaments* of a certain building, or a certain style of building, to produce the best effect of the style or building in question. But so far is this from being the true mode of attaining this result, that in every case where it is adopted, as we perceive at a glance, the result is altogether unsatisfactory.

Ten years ago the mock-grecian fashion was at its height. Perhaps nothing is more truly beautiful than the pure and classical Greek temple—so perfect in its proportions, so chaste and harmonious in its decorations. It is certainly not the best style for a country house; but still we have seen a few specimens in this country, of really beautiful villas in this style—where the proportions of the whole, and the admirable completeness of all the parts, executed on a fitting scale, produced emotions of the highest pleasure.

But, alas! no sooner were there a few specimens of the classical style in the country, than the Greek temple mania became an epidemic. Churches, banks and court-houses, one could very well bear to see *Vitruvianized*. Their simple uses and respectable size bore well the honors which the destiny of the day forced upon them. But to see the five orders applied to every other building, from the rich merchant's mansion to the smallest and meanest of all edifices, was a spectacle which made even the warmest admirers of Vitruvius sad, and would have made a true Greek believe that the gods who preside over beauty and harmony, had forever abandoned the new world!

But the Greek temple disease has passed its crisis. The people have survived it. Some few buildings, of simple forms, and convenient arrangements, that stood here and there over the country, uttering silent

rebukes, perhaps had something to do with bringing us to just notions of fitness and propriety. Many of the perishable wooden porticoes have fallen down; many more will soon do so; and many have been pulled down, and replaced by less pretending piazzas or verandas.

Yet we are now obliged to confess that we see strong symptoms manifesting themselves of a second disease, which is to disturb the architectural growth of our people. We feel that we shall not be able to avert it, but perhaps, by exhibiting a *diagnosis* of the symptoms, we may prevent its extending so widely as it might otherwise do.

We allude to the mania just springing up for a kind of *spurious* rural gothic cottage. It is nothing more than a miserable wooden thing, tricked out with flimsy verge boards, and unmeaning gables. It has nothing of the true character of the cottage it seeks to imitate. It bears the same relation to it that the child's toy-house does to a real and substantial habitation.

If we inquire into the cause of these architectural abortions, either Grecian or Gothic, we shall find that they always arise from a poverty of ideas on the subject of *style* in architecture. The novice in architecture always supposes, when he builds a common house, and decorates it with the showiest *ornaments* of a certain style, that he has erected an edifice in that style. He deludes himself in the same manner as the schoolboy who, with his gaudy paper cap and tin sword, imagines himself a great general. We build a miserable shed, make one of its ends a portico with Ionic columns, and call it a temple in the Greek style. At the same time, it has none of the proportions, nothing of the size, solidity, and perfection of details, and probably few or none of the remaining decorations of that style.

So too, we now see erected a wooden cot-

tage, of a few feet in length, *gothicized* by the introduction of three or four pointed windows, little gables enough for a residence of the first class, and a profusion of thin scolloped verge boards, looking more like card ornaments, than the solid, heavy, carved decorations proper to the style imitated.

Let those who wish to avoid such exhibitions of bad taste, recur to some just and correct principles on this subject.

One of the soundest maxims ever laid down on this subject, by our lamented friend Loudon, (who understood as well as any one that ever wrote on this subject its principles,) was the following: "*Nothing should be introduced into any cottage design, however ornamental it may appear, that is at variance with propriety, comfort or sound workmanship.*"

The chiefest objection that we make to these over-decorated cottages of very small size, (which we have now in view,) is that the introduction of so much ornament is evidently a violation of the principles of *propriety*.

It cannot be denied by the least reflective mind, that there are several classes of dwelling houses in every country. The mansion of the wealthy proprietor, which is filled with pictures and statues, ought certainly to have a superior architectural character to the cottage of the industrious workingman, who is just able to furnish a comfortable home for his family. While the first is allowed to display even an ornate style of building, which his means will enable him to complete and render somewhat perfect—the other cannot adopt the same ornaments without rendering a cottage, which might be agreeable and pleasing, from its fitness and genuine simplicity, offensive and distasteful through its ambitious borrowed decorations.

By adopting such ornaments they must therefore violate propriety, because, architecturally, it is not fitting that the humble cottage should wear the decorations of a superior dwelling, any more than that the plain workingman should wear the same diamonds that represent the superfluous wealth of his neighbor. In a cottage of the smallest size, it is evident also, that, if its tenant is the owner, he must make some sacrifice of comfort to produce effect; and he waives the principle which demands sound workmanship, since to adopt any highly ornamental style, the possessor of small means is obliged to make those ornaments flimsy and meagre, which ought to be substantial and carefully executed.

Do we then intend to say, that the humble cottage must be left bald and tasteless? By no means. We desire to see every rural dwelling in America tasteful. When the intelligence of our active-minded people has been turned in this direction long enough, we are confident that this country will more abound in beautiful rural dwellings than any other part of the world. But we wish to see the workingman's cottage made tasteful in a simple and fit manner. We wish to see him eschew all ornaments that are inappropriate and unbecoming, and give it a simple and pleasing character by the use of truthful means.

For the cottage of this class, we would then entirely reject all attempts at columns or verge boards.* If the owner can afford it, we would, by all means, have a veranda (piazza,) however small; for we consider that feature one affording the greatest

* Of course, these remarks regarding decorations do not apply strictly to the case of cottages for the tenants, gardeners, farmers, etc., of a large estate. In that case, such dwellings form parts of a highly finished whole. The means of the proprietor are sufficient to render them complete of their kind. Yet even in this case, we much prefer a becoming *simplicity* in the cottages of such a desmesne.

comfort. If the cottage is of wood, we would even build it with strong *rough* boards, painting and sanding the same.

We would, first of all, give our cottage the best *proportions*. It should not be too narrow; it should not be too high. These are the two prevailing faults with us. After giving it an agreeable proportion—which is the highest source of all material beauty, we would give it something more of character as well as comfort, by extending the roof. Nothing is pleasanter to the eye than the shadow afforded by a projecting eave. It is nearly impossible that a house should be quite ugly, with an amply projecting roof; as it is difficult to render a simple one pleasing, when it is narrow and *pinched* about the eaves.

After this, we would bestow a little character by a bold and simple dressing, or facing, about the windows and doors. The chimneys may next be attended to. Let them be less clumsy and heavy, if possible, than usual.

This would be character enough for the simplest class of cottages. We would rather aim to render them striking and expressive by a good outline, and a few simple details, than by the imitation of the ornaments of a more complete and highly finished style of building.

In the frontispiece, fig. 30 and fig. 31, we have endeavored to give two views of a workingman's cottage, of humble means.*

Whatever may be thought of the effect of these designs, (and we assure our readers that they appear much better when built than upon paper,) we think it will not be denied, that they have not the defects to which we have just alluded. The style is as economical as the cheapest mode of building; it is ex-

pressive of the simple wants of its occupant; and it is, we conceive, not without some tasteful character.

Last, though not least, this mode of building cottages is well adapted to our country. The material—wood—is one which must, yet for some years, be the only one used for small cottages. The projecting eaves partially shelter the building from our hot sun and violent storms; and the few simple details which may be said to confer something of an ornamental character, as the rafter brackets and window dressings, are such as obviously grow out of the primary conveniences of the house—the necessity of a roof for shelter, and the necessity of windows for light.

Common narrow *siding*, (*i. e.* the thin *clapboarding* in general use,) we would not employ for the exterior of this class of cottages—nor, indeed, for any simple rural buildings. What we greatly prefer, are good strong and sound boards, from ten to fourteen inches wide, and one to one and a fourth inches thick. These should be tongued and grooved so as to make a close joint, and nailed to the frame of the house in a *vertical* manner. The joint should be covered on the outside with a narrow strip of inch board, from two to three inches wide. The accompanying cut, fig. 32, *a*, showing a section of this mode of weather boarding will best explain it to the reader.

We first pointed out this mode of covering, in our “Cottage Residences.” A great number of gentlemen have since adopted it, and all express themselves highly gratified with it. It is by far the most expressive and agreeable mode of building in wood for the country; it is stronger, equally cheap, and much more durable than the thin *siding*; and it has a character of strength and permanence, which, to our eye, narrow and thin boards never can have.

* We do not give the interior plan of these, at present. Our only object now is to call attention to the exteriors of dwellings of this class.

When *filled in* with cheap soft brick, it also makes a very warm house.

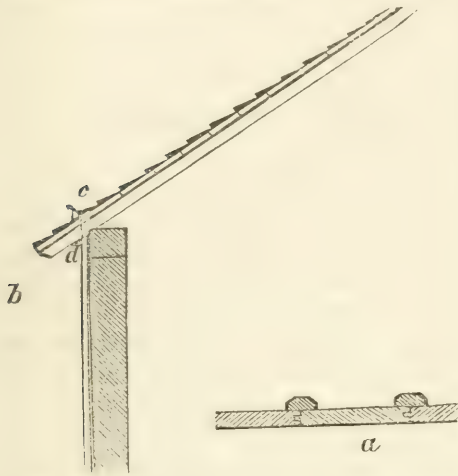


Fig. 32. Cottage Siding and Roofing.

The rafters of these two cottages are stout joists, placed two feet apart, which are allowed to extend beyond the house, two feet, to answer the purpose of *brackets* for the projecting eaves. Fig. 32, *b*, will show, at a glance, the mode of rafter boarding and shingling over these rafters, so as to form the simplest and best kind of roof.*

The window dressings, which should have a bold and simple character, are made by nailing on the weather boarding stout strips, four inches wide, fig. 33, *a*, of plank, one inch and a half in thickness. The coping piece, *b*, is of the same thickness, and six to eight inches wide, supported by a couple of pieces of joists, *c*, nailed under it for brackets.

We have tried the effect of this kind of

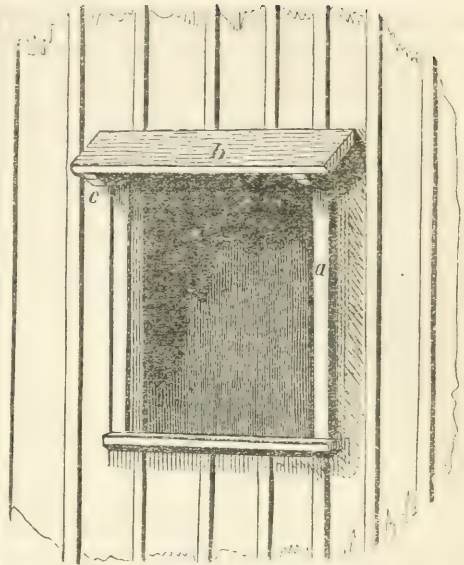


Fig. 33. Cottage Window Dressing.

exterior, using *unplaned* boards, to which we have given two good coats of paint, *sanding* the second coat. The effect we think much more agreeable—because it is in better keeping with a rustic cottage, than when the more expensive mode of using planed boards is resorted to.

Some time ago, we ventured to record our objections to *white*, as an universal color for country houses. We have had great satisfaction, since that time, in seeing a gradual improvement taking place with respect to this matter. Neutral tints are, with the best taste, now every where preferred to strong glaring colors. Cottages of this class, we would always paint some soft and pleasing shade of drab or fawn color. These are tints which, on the whole, harmonize best with the surrounding hues of the country itself.

These two little designs are intended for the simplest cottages, to cost from two to five hundred dollars. Our readers will not understand us as offering them as complete models of a workingman's cottage. They

* The simplest mode of forming an eave gutter on a projecting roof like this, is shown in the cut, fig. 32, at *c*. It consists merely of a tin trough, fastened to the roof by its longer portion, which extends up under one layer of shingles. This lies close upon the roof. The trough being directly over the line of the outer face of the house, the leader *d*, which conveys away the water, passes down in a straight line, avoiding the angles necessary in the common mode.

are only partial examples of our views and the subject, from time to time, with various taste in this matter. We shall continue other examples.

Notes on the State of the Rural Arts in the Valley of the Mississippi.

BY THOMAS ALLEN, OF ST. LOUIS, MO.

I AM glad to perceive that we are to have a new magazine devoted to Horticulture, Rural Art and Rural Taste.

The occasion is a fitting one for me to say, that it is not difficult to account for the apparent want of taste in Rural Architecture in this country. I say apparent, for it is not time yet to decide that there is a real want of it. The great majority of our people have been obliged to content themselves with the merely necessary; and those only have been able to adorn, who have prospered to the requisite height of leisure and means. If a magazine, exclusively devoted to the ornamental departments of Rural Life, can be sustained, it will prove an increased love for that life and activity in it. Rural Architecture will develop itself with the advance of the country in civilization and wealth, and its results will be at once the evidence and the consequence of prosperity somewhere. In proportion to the number of individuals embraced in that prosperity, shall we observe the frequency and generality of those results. We must look to the future for originality in design. At present the higher grades of our art in this country are imitative. I know of but one existing evidence of an attempt to originate an American Order of Architecture, and that consists in the marble columns, representing bundles of Indian corn, standing in the vestibule of the United States Supreme Court at Washington.

There are very few people who are not pleased with real rural decorations, although

there may be many, loving them, who have not the genius, the energy, the leisure or the means, to originate them, or to appropriate to their own use those already planned. But all are not architects, nor lovers of architecture. Some architects are born, others made; and in all, the art may be cultivated and improved by reflection, by custom, by examples, and by rational teaching. The love and effect of it will increase by study and observation. It inspires a taste for neatness and regularity, and in its more imposing forms, has an impressive effect in exciting emotions of beauty, grandeur and durability. But in forming a national taste in architecture, a right direction will not be given, unless there are included in the practical philosophy of the subject, other considerations than those appertaining to merely mechanical construction. There must be the fitness of the building to the object, the suitableness of the order to the place, the adaptation of the materials to the purpose, of style of construction to the climate, and a proper proportion, having reference as well to the several members of the structure itself, as to all the parts and circumstances that are to be inevitably combined in the whole result. It is an art of peace, combining beauty with utility; and the full development of it, in its true philosophy, supposes an advancement in civilization and refinement, to which but few nations have attained. Love of country, and a feeling of contentment and security, must almost necessarily precede and accompany it

A taste or relish for rural life, I believe to be natural and general. But the forms with which that taste will surround itself, will depend on the circumstances of its possessor, or on the associations or the cultivation of his mind. When I see the humblest dwelling, adorned by a yard of shrubbery and flowers, however small, laid out and preserved in order and neatness, I consider it a good mark, better than a bright motto at the head of a composition, an evidence of better things unseen, the harbinger of a gentle heart and of a home of peace, where the affections are cultivated, serenity dwells, and such benevolence is distilled as seeks its object quietly like the dews of heaven. I enter it with pleasant anticipations. But when I see another dwelling, however large, a mere ostentatious mass of bricks and mortar, surrounded by grounds, however spacious, slovenly kept, and barren of the fruits of gentle cultivation, I feel a repugnance to it, as to the abode of a man "fit for treason, stratagems and spoils," inhospitable and cold. I approach the entrance with distrust. The pioneer, however, who, like honest Daniel Boone, will always live so near the wilderness that he may fell the trees to reach his cabin door, belongs to a class entitled to decided exception in respect to this subject. They are a hardy and an honest race, who regard many of the arts of civilized life as effeminate, and escape from them as they approach. Those arts can seldom win them from their devotion to uncultivated nature. Many of them have felt injustice in civil government, and they hate it; but they love not the less their fellow-men, and their cabin is the abode of cheerfulness and hospitality.

Architecture and horticulture are not improved into the dignity of fine arts, by our western people generally, for obvious reasons and causes. Most of them are com-

pelled by necessity to be content with what is merely essential. Practically, therefore, they seem to evince their concurrence in the opinion of Lord Verulam, that "houses are built to live in, and not to look on." The log cabin, at first intended as a castle of security against savages and wild beasts, as well as a protection from the weather, is continued from convenience, and even necessity. Every new farm that is to be "settled," opened and "improved," is to be so for the first time since the creation, perhaps. The first thing to be done, and that speedily too, is to erect a dwelling—then to make a "clearing," and build a log or rail fence. The timber is at hand. But whether the site selected be in a prairie, on the border of forest and prairie, or in the heart of the woods, it is nearly always remote from saw-mills, and perhaps even from neighbors. But few hands are required, and no other implement than the axe. Generally, the new settler has very little capital, if any, beyond the amount necessary to pay for his land at \$1.25 per acre. His own right arm, then, is his main reliance. But markets are remote, and prices of produce low, though his lands are prolific. He advances slowly. In a few years, however, you will perhaps observe that he takes a step indicative of prosperity. His first cabin, which was built of round logs, merely notched at the ends, overlapping and binding each other at the corners, or of a series of rough posts set perpendicularly in the ground, the gaping interstices in either case being filled with mud and stones, is now exchanged for a new, a better, and a more commodious LOG HOUSE. His timbers are now hewed square, dovetailed at the corners, and closely jointed. The building, square before, with only one room and one story, now takes the form of a parallelogram, rises to the dignity of a story and a half;

stone or brick chimneys take the place of mud and staves; the happy proprietor treats himself to two, three or four apartments, and to an area or open space through the centre, with doors opening into the apartments on the right and left, and perhaps he allows the roof to extend over one or both the sides, furnishing the luxury of external umbrage or a "gallery." He now begins to regret that, at the commencement of his "improvement," he had not left here and there a tree for shade or ornament. But as he had injudiciously caused every vestige of the primitive forest to disappear from the immediate vicinity of his door, he now begins to transplant trees. He encloses a yard and garden plat with a new fence of palings split from oak of the straightest grain, transfers to the borders a few plants of the Wild Rose, the Wild Gooseberry, the Buffalo Berry, and the Service, all from the native forest; and his rising family, rejoicing in the spirit and means of improvement, look smarter, brighter, prouder, and happier than ever. This, with perhaps the future addition of a wing, is often the height of improvement, in respect to the dwelling house, even among the prosperous, for a generation or more. In the vicinity of cities and towns, however, the old log house often becomes the frame of a new and more ornamental residence, as happened to be the case, in part, with Gen. Harrison's house at North Bend, and as is the case with many of the existing old French dwellings of St. Louis.

The earliest settlers of Missouri and Illinois were French. The love of country life is not general among the French; no race of people being more social and gregarious than they. They settled here in small villages, and their style of building, as well as other habits, were peculiar, and still adhere to most of their descendants now remaining. They gave some little attention

to gardening and the cultivation of fruits. Scarcely any examples, however, remain, and their fruits are nearly or quite extinct here. Their style of building was humble, but well adapted to the climate, and to village sociality. Their houses were built of wood, excepting a few in the neighborhood of stone quarries, and generally but one story high, and invariably surrounded, wholly or partly, by verandas or piazzas. Nearly all the houses now standing in the older towns, such as Cahokia, Vide Poche, &c., are of this description, and they have exhibited scarcely a sign of improvement in a century. Their piazzas, affording an agreeable protection from the hot sun of this climate, were favorable to the social as well as indolent habits of the villagers, and could they speak, would no doubt tell us of many mirthful and hospitable scenes. The accounts of the pursuits and domestic manners of these French pioneers are interesting, but I have no place for them here. They were traders, voyageurs and trappers.

In respect to Horticulture, the people of the West have but little to boast of with reference to the style with which that art is prosecuted; but as to abundance, variety, and magnitude of product, they will compare notes with any other people with pleasure and confidence. What you teach as the "Art of Gardening," is generally known in the West by the singular synonym of "tending a truck patch." This we all understand, and the main effect studied is the daily plentiful supply of "garden truck" in the kitchen pot. There are some exceptions, even west of the Mississippi. The field crop, however, is the main reliance, and receives the most attention; and I have known instances of very good farms being destitute of any sort of garden whatever. Generally, weeds and vegetables teem from the fertile soil in astonishing luxuriance, wherever gardens

are attempted; and every where, the western gardens show great kindness in nature, but much carelessness in man. You will find abundance of corn and potatoes (not diseased,) sunflowers and cabbage, beets, parsneps, onions, egg-plants, tomatoes, squashes and gourds of almost incredible dimensions, in the very shadow, perhaps, of the wilderness; here and there you will observe an orchard of apples and peaches, or a strawberry "patch" of no small extent, or perhaps the beginning of a vineyard. Such "patches" as these suggest whatever emotions of sweetness or grandeur, wildness, surprise, or wonder, are to be derived from so primitive and merely useful a condition of the art of gardening. The enormous size and great abundance of his products however, no doubt furnish the western cultivator present satisfaction for the want of polished parterres, trim walks, statues, temples, fountains and buildings, while he feels at the same time no particular obligation to divide with man the tribute of gratitude he freely pays to the Great Designer.

But the glorious West is rising and advancing. With the increase in population and wealth, our cities and towns are going

forward in all the arts of life. Tempted by offers of constant employment and high wages, some of the best mechanics are seeking our western towns, and every year indicates improvement in the art of building. As fortunes accumulate, men retire to the suburbs or the country, purchase sites for residences, begin to embellish their grounds, and surround themselves with the comforts and luxuries of art and nature. True, we cannot yet boast the beautiful country seats which so much adorn the vicinity of Boston, yet we can point to some sites of remarkable natural beauty, and to a few buildings and decorations of some taste.

A voluminous western writer has said that "this is not so good a country for gardens as the North." In my opinion, Alison is nearer the truth, in predicting that "the Valley of the Mississippi is to be the *Garden of the World*." Give us a few years of continued peace and judicious government, and the great destiny of this Valley will soon become apparent.

Wishing success to your new enterprise, I subscribe myself your obt. servt.

THO: ALLEN.

St. Louis, Mo., July 21, 1846.

Remarks on the True Peach Plum and four other Varieties.

THERE is a French Plum of large size and very beautiful appearance, described by NOISETTE, POITEAU, and other French pomologists, as the *Prune Pêche*, or Peach Plum. It is most probably very little known out of France, since it is not recognized or described as a distinct variety, by any English or American pomologist down to the present time.

THOMPSON, in the last edition of the Lon-

don Horticultural Society's Catalogue, as well as in the Pomological Magazine, gives the *Prune Pêche* as synonymous with the Nectarine. LINDLEY follows the latter work in his "Guide to the Orchard." In our work on Fruits, never having been able to find the true Peach Plum, we also placed it as a synonym of the Nectarine. But, at the same time, we added the following paragraph:

"Mr. Rivers has lately sent to this country, trees of the PEACH PLUM, which, he says, is the *Prune Pêche* of Brittany, superior to and quite distinct from the Nectarine."

Singularly enough accident made us acquainted with the fact that, in the city of Schenectady in this state, the genuine Peach Plum has been considerably cultivated for more than twenty years in the greatest perfection. Mr. CHARLES H. TOMLINSON of that place, desirous of clearing up some doubts in relation to the plum known as Duane's Purple, brought us at the close of July, some very remarkable looking plums, strikingly different from any other variety.* Having excellent colored drawings and descriptions of the *Prune Pêche*, both in the *Jardin Fruitier* of NOISSETTE, and the *Pomologie Française* of POITEAU, we recognized the specimens immediately as the genuine old Peach Plum of France, which is scarcely at all known to cultivators, from its having been confounded with the Nectarine Plum.

This true Peach Plum is a superb fruit. It could never have been received correctly in the garden of the London Horticultural Society, for a single glance at the external appearance of the fruit is sufficient to distinguish it from all other plums. Its color, as is correctly shown in the colored plates of the two French authors just mentioned, is a dark salmon-red, while that of the Nectarine Plum, as every one knows, is a distinctly *purplish-red*. Again, the Peach Plum ripens here ten days before the Washington, making it among the *earliest* of Plums. (NOISSETTE says, in France it ripens from the tenth to the twentieth of July.) The Nectarine Plum does not ripen here till the middle or last of August, a week or ten

days after the Washington, and three weeks later than the Peach Plum.

Considering its large size, its early maturity, and agreeable flavor, we think the Peach Plum will be a valuable acquisition to our fruits. Mr. TOMLINSON showed us some specimens when we were in Schenectady on the first of August, one of which measured six inches and a half in circumference. We have prepared an outline of this variety, and made the following description with the fruit before us.

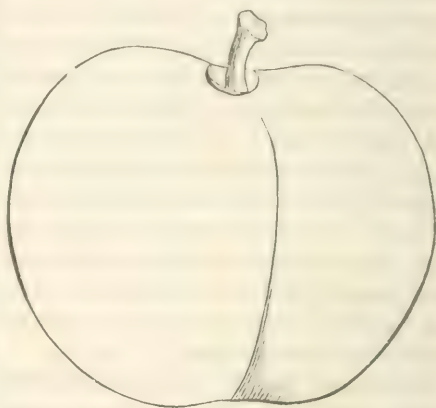


Fig. 34. *The Peach Plum.*

PEACH PLUM. *Prune Pêche*, Noisette, Poiteau.—The tree is a pretty strong grower, with stout smooth shoots. Fruit very large, shaped more like a peach than a plum, being usually wider than its depth; regularly formed, roundish, much flattened at both ends; suture shallow, but strongly marked; apex much depressed, with a punctured mark at the point. Skin light brownish-red, nearly a salmon colour in its lightest portions, sprinkled with obscure dark specks, and covered with a delicate pale bloom. Stalk very short, rather stout, set in a shallow narrow cavity. Flesh pale yellow, a little coarse-grained, but juicy and

* Mr. Tomlinson has favored us with a letter on this subject, which our readers will find among the *Domestic Notices*.

of pleasant sprightly flavor when fully ripe; it separates freely from the stone. Stone nearly round, very flat, and much furrowed. Ripe from the twentieth to the last of July. It is certainly the largest early plum, and is well worthy of cultivation. A moderate bearer.

We have before us specimens of the Nectarine Plum. Its colour, flavor, and season of ripening, as we have already stated, are very different from the Peach Plum. Having described this fruit in our "Fruit and Fruit Trees," we only add here an outline.

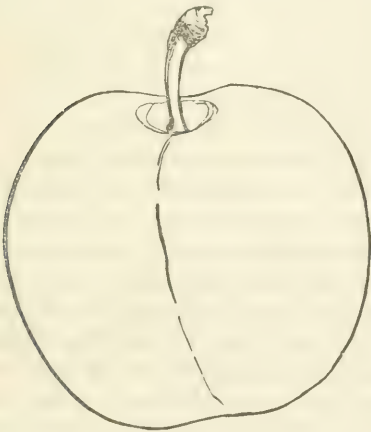


Fig. 35. The Nectarine Plum.

It is very well known in this country. The Goliath, also a large purple plum, considerably resembles it, as we find to-day on again comparing the fruits together; but the Nectarine has very broad leaves and almost smooth shoots, while the Goliath has narrow leaves and very hairy shoots.

There is a curious bit of pomological history connected with the introduction of the genuine Peach Plum into this country.

The late Judge DUANE imported several varieties of fruit from France, twenty-six years ago. On their way, as it often happens, some of the trees lost their labels.

Among these was a Plum tree, which Judge Duane planted in his own garden in Schenectady. The size and beauty of this plum attracted attention, when it came into bearing; and, having lost its name, it became known in Schenectady as *Duane's Plum* and the *Apricot Plum*, as indeed it more strictly resembles in colour a ruddy specimen of the Apricot than the Peach, though very distinct from the true Apricot Plum.

Twenty years ago, or more, Judge DUANE sent some grafts or trees of a Plum to the late WILLIAM PRINCE of Flushing, for this fruit. Mr. PRINCE propagated it, advertised it as in his nurseries, and sold it as *Duane's Purple French*.^{*} But by some unaccountable mistake, only very lately discovered, the French plum, that Judge DUANE intended to send, which was this identical *Peach Plum*, was not sent, but instead a seedling plum then growing in his garden. Mr. TOMLINSON informs us that the Duane family in Schenectady, who till the present time cultivate this *Peach Plum* imported by the Judge, suppose that the person sent by him to cut the grafts, took, by mistake, grafts from a natural tree standing near by.

This natural tree is a kind of large American Magnum Bonum, well known in Albany and Schenectady, and which, perhaps, was really first raised by Judge DUANE. It is larger and finer than the old, or European, Magnum Bonum. It is the fruit known in all the nurseries about New-York, Boston, and here, as *Duane's Purple*. Mr. PRINCE, supposing it to be the celebrated French plum which Judge DUANE had sent him, disseminated it among all the nurseries.

The same plum is described by us in the "Fruit and Fruit Trees of America." We subjoin the outline from that work. As it

^{*} It is partially described in Prince's *Pom. Manual*.

is quite different from the true *Red Magnum Bonum*, and as it is a very large and good

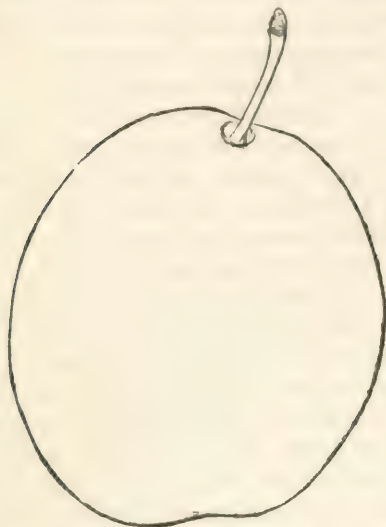


Fig. 36. Duane's Purple Plum.

fruit, it should retain its name of *Duane's Purple*, and drop the appellation of *French*. The French plum, so long unknown to those who have cultivated it about Schenectady, is the genuine old Peach Plum, and we are delighted to find it, like most other European plums, better here than in Europe.

To aid cultivators in identifying the sorts,

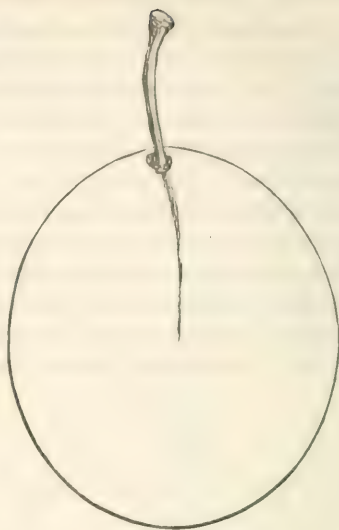


Fig. 37. The Red Magnum Bonum.

we give also a figure of the *Red Magnum Bonum*, from a fruit now before us. It is known in some parts of the country as *Red Imperial*. It is a *freestone*, with smooth shoots. Duane's Purple is a *clingstone*, with quite downy shoots. The Nectarine, Goliath, Red Magnum Bonum and Duane's Purple, are among the largest purple plums, but we consider them all decidedly inferior to the COLUMBIA in size, and more particularly in flavor.

THE CHILI STRAWBERRY.

TRANSLATED FROM THE GERMAN, BY J. W. KNEVELS.

[THE following is an extract from a very long article on the Chili Strawberry, published in the *Allgemeine Garten-zeitung*, (Garden Gazette, of Berlin,) translated from the German, for this magazine, by J. W. KNEVELS, Esq., of Fishkill Landing. The Chili Strawberry is an enormous and superb fruit, but seldom seen in this country, the

cultivation of which is usually so little understood, that it is soon lost. We saw some very fine plants three years ago, in the garden of Wm. H. Aspinwall, Esq., at his fine country residence, on Staten Island. These plants were brought direct from South America.

This article possesses some points of

interest at the present moment, from the remarks respecting the impregnation of the sterile blossoms, a subject exciting so much attention in this country at the present moment.—Ed.]

.....

The cultivation of the Chili Strawberry in relation to its adaptation to our climate as well as in respect to its sexuality, is different from that of the other sorts.

France having been the first to receive this sort, and it having prospered remarkably at Brest, I will now repeat what Poiteau has imparted to us respecting it, under the head of *Cultivation in the neighborhood of Paris*. Except by Messrs. Vilmorin and Noisette, in Paris, this strawberry is only cultivated in the kitchen garden of Versailles, where it however receives less attention than the other sorts, on which account it does not attain the same degree of perfection which it arrives at under the greater care bestowed upon it in Paris. In a clayey, wet and cold soil, it soon dies out; and also a light, dry, nitrous earth, in which are found particles of gypsum, as is the case in most Parisian gardens, agree no better with it. The nitre of this soil, in which many plants thrive, is very unfavorable to the Chili Strawberry. On the contrary, we have met with them growing well in a mellow soil, with a dry bottom. Finally, a soil which is half loose and half sandy, letting the water off readily, and with a subsoil rather dry than moist, is particularly well adapted for them. But a mixture of sandy heath soil, is still more beneficial and more serviceable in every respect. Whether this soil be found on the spot, or be artificially provided, it is always necessary that the beds should incline to the south, and be protected on the north side by a wall or other shelter. An inclination to the south assists the

running off of the water during winter, and allows greater power to the rays of the sun.

The Chili Strawberry plant is so tender that its roots, during any cessation of its vegetation, easily rot; the spring is therefore the best time for planting. After the soil has been well stirred and mixed with light earth, you set out runners of last year, at distances, respectively of fifteen inches asunder, and water and shade them during the strength of the sunshine. However, since this kind require foreign fertilization, you must, at the same time, plant in their vicinity, either some of the Pine apple, Bath, Carolina, or of the male or hermaphrodite Hautbois strawberries. We give the preference to the Pine-apple, because it blooms later and seems most nearly related to the Chili. In setting out, therefore, a bed of the latter, plant eight or nine of the other kinds between, by which fructification will be effected.

But since the Chili blossoms later than the other sorts, and the fertilization may in consequence fail, Duchesne, to obviate the failure, has proposed the following precautionary measure.

Bearing in mind, in the first place, that the situation and exposure we have assigned to the Chili necessarily forwards their vegetation, nevertheless, they are the latest. In order, therefore, to equalize, to bring to the same period their flowering, until those to be employed in fertilizing them, it is requisite to retard the latter on the expanding of their blossoms. With this view, it is recommended to plant the sorts designed for this purpose in pots one season beforehand, and place them, in order to retard their vegetation, in a northerly exposure, give them just enough water to prevent their drooping, and treat them, in other respects, in the management of their flow-

ering, so that they may blossom at the same time with the Chili.

Duchesne's second method consists in digging up old strawberry stocks, with balls of earth previous to their blossoming, planting them among the Chili, watering them very sparingly, and thus retarding their progress.

The third mode may be the neatest, but is not the speediest. To apply it one must always have a provision of the strawberries intended to be used to impregnate the Chili, in some northerly situation, where, of course, they will bloom late, from what Duchesne terms *malarie*. These supply the strawberries for fertilizing the other, and are thus applied. Towards evening he cut off the half-closed or rather half-opened umbels, with foot-stalks from one to three inches long, placed them in small phials filled with water, and then brought them to the beds of expanded Chilians, and in order that each set might be brought into close contact, he buried the phials into earth close to the Chili plant. The next day the blossoms opened, and the impregnation was successfully completed. After the petals are shed, the cup or calyx closes and the young fruit bend downwards to the earth, until, increasing in size, they can erect themselves.

Poiteau says that in Paris the Chili never attains the same size it does at Brest, and never assumes the bizarre shapes in the fruits of that vicinity. We have found the quality of both to be similar.

The Chili requires much care to raise them in perfection, especially by removing the runners and thinning the leaves; without these operations they would soon be smothered and dwindle for want of sufficient nourishment. They also demand more frequent removing of the beds, that is, of transplantation, than the other kinds,

and they can seldom be kept in one spot longer than three years. They have never been raised from seed in Europe, and this is the surest evidence of the barrenness of the stamen; wherever the fruit bears good seed, they have been impregnated by other strawberries.

Noisette is, in all essentials, in regard to their culture, of Duchesne's opinion. He also considers a loose, sandy heath soil the most proper, but still admits that in one case he found the Chilian, thriving in a garden in Paris, where the soil had not been mixed or prepared according to the direction. The method which I employ in the culture of these strawberries, differs, in many respects, from that of Poiteau. I must confess, however, that I have had no great success in bringing them to fruit, as I have never practised artificial impregnation, but have generally left it to chance, or to the agency of other sorts usually growing near by. But as I arranged the order of my beds in my strawberry plantation, according to Barnet's classification, in whose system the Pine-apple and Chili are next each other, the latter have still borne some fruit, although in no great quantity. They have not attained the size natural to them, under proper cultivation and circumstances, but have been always well tasted. The soil of my beds has not been specially prepared for them, but they are planted along with the other kinds in ground trenched to the depth of one foot and a half, richly manured, and mixed with sand.

I transplant them, like the others, every three years, and only by runners, separating as soon as they have rooted, (probably in July,) from the mother plant, and transfer them to the beds prepared, setting them out at the distance of two feet every way. During summer they are abundantly matured. Runners not required for making

new beds, I cut off as soon as they make their appearance, but never the leaves. As the cold weather approaches, I give them a light covering of rotten manure. In the spring this is raked off and dug in between the rows, and the beds kept free from weeds. Although my plan does not prove that the Chili bears fruit of the largest size among strawberries, which they would do with more care, industry and attention to the means necessary to that end, it yet shows that they are by no means so delicate and sensitive as Poiteau describes them; and no one need feel any apprehension on that account, in undertaking to cultivate them.

.....

REMARKS BY THE TRANSLATOR.

After this somewhat minute dissertation, one is inclined to draw some practical inferences from the statements just read. The principal conclusion must be, that we are in want of more light, both in regard to the strawberry in general, as well as in respect to the particular kind we have under examination. The following inquiries suggest themselves, and individuals having means of ready communication with Chili, might much benefit us in setting on foot some investigation respecting the latter, as it appears in its native country, while others may be as profitably employed in closely examining those we possess, whether in our gardens, or growing wild in our fields, woods and wastes. It may be necessary to premise, to guard against mistakes, that the name Chili has been applied to strawberries not included in the class to which the term is now exclusively confined; such are in general synonyms of kinds ranked in the third class, Pine strawberries.

Of our indigenous sorts we find several in our vicinity, and growing in very dif-

ferent soils and localities, some in meadows, others in bare clay banks, in sand, and even on the highest points of our mountains; the varieties seem more numerous than is admitted by botanists. Amongst these may be mentioned a sort with longish fruit, with a decided neck, and highly perfumed, deserving our attention as adapted to the impregnation of other kinds to produce new seedling varieties. A few sets I have removed into my garden, for further observation. We have also a white, like the English White Wood, probably from seed accidentally dropped.

The bad effect of plaster on Chili strawberries, in the neighborhood of Paris, where that mineral abounds, corroborates the opinion of our farmers, who attribute the gradual disappearance of the strawberry from our fields to the general use of gypsum. We have, nevertheless, heard of its being recommended to be applied to them; but should consider it inexpedient, if from no other reason, than lest it should introduce the small creeping clover, so difficult to eradicate, into the beds, which it would unquestionably do. We must also observe, that barren plants are not confined to those under cultivation, but prevail amongst the wild.

Many other plants beside the Strawberry show the same imperfection, as, for instance, our grape vines, which are often barren from a defect in the sexual parts; so it is in the *Rhamnus* and the *Celtis*. (Vide *Eaton's Manual* under *Vitis rhamnus* and *Celtis*, and *Gray's Botany*, p. 305, 306.)

Another subject of inquiry will be, as to the truth of the assertion, that the runners from fertile plants finally become barren; this seems hardly probable, as far as structure is concerned; it may be from exhaustion of the soil. It would be well further to examine as to the superior value of

pistillate plants, *i. e.* deficient in the male organs, as to size of fruit, &c., taking care of course, to have a supply of plants near with staminate flowers, duly supplied with pollen. Mr. Knight believed them to be preferable.

We may here remark, that perhaps the agency of bees, in carrying the pollen from the male to the female flowers, is more important than is generally adverted to, and that the keeping of apiaries, so generally practised sixty years ago, is now growing less frequent. If they benefit strawberries, however, let us recollect that they may, in the same way, prejudice the seeds of our cucumbers and melons, cabbages and radishes, &c., by intermingling inferior with superior sorts.

In reference to the Chili Strawberry in particular, we may expect that our summer sun is better adapted than that of France or England, to bring them to perfection, es-

pecially as regards flavor; and they may, therefore, deserve more attention than we have hitherto given them. It would be a meritorious act to procure some of them from Chili, as well as seed, and to inquire whether, in the neighborhood of Concepcion, more than one native sort is cultivated; whether they are always staminate, pistilliferous, or perfect hermaphrodites, or imperfectly so, or apt to vary from one to the other, and as to their value there, contrasted with others in point of flavor, size, hardness and productiveness. The sort mentioned by Noisette, as in his possession, (*vide translation above*,) might also be wrote for, inquiring if it really be a true unadulterated Chili, and not a hybrid, as is more probably the case, unless there has been other importations into France, besides Frazier's from Chili.

JOHN W. KNEVELS.

Fishkill Landing, N. Y.

GROUPING FLOWERS—A SUGGESTION.

BY J. J. THOMAS, OF MACEDON, N. Y.

MUCH attention has been given of latter years, to the arrangement of flowers in beds, for brilliant effect, by the intermixture of colours in contrast, as well as by the more rich display of the same plant in large masses. I have noticed, however, very little, if any thing, either in books or in practice, in relation to the grouping of flowers, on a principle somewhat analogous to that which governs the grouping of trees in artificial landscapes.

Trees are admired for their foliage and mode of growth. Hence those are to be combined in groups, which possess a similarity of growth and foliage. On the other hand, the chief beauty of herbaceous flow-

ering plants is their flowers. Hence, in grouping the latter, a similarity in colour and inflorescence should govern their arrangement.

A practice much admired and becoming prevalent, is the formation of circular and elliptical flower beds in closely shaven turf. The turf is better adapted to our drier climate than that of England, and presents a decidedly better appearance than bare gravel. Each of these beds is often entirely occupied with a single variety, densely planted, and affording, at the proper season, a truly rich display of flowers. It is believed that an improvement may be made by planting a few different flowers in the same

bed, not for promiscuous intermixture or to present strong contrasts, but to exhibit a rich blending of colours, slightly variant, or to place together several plants of similar habit of growth. Care must be taken that these plants all flower at once; and each bed would hence present, while in flower, a perfect group in itself.

Much skill might be brought into exercise, by the proper disposition of these beds in different parts of the ground, for landscape effect; and artificial or aerial distance might also be created, by placing flowers of brighter and richer colours, as orange or crimson, and of more dense growth, on the foreground; and those of lighter foliage and more feathery growth, and with paler flowers, as pale blue or purple, on more distant parts, as seen from the principal points of view.

The principles on which different colours may be suitably grouped and blended, without being incongruous, would doubtless require much close observation and study. A general rule, perhaps, is afforded by the fact, that plants of different colours may be mixed, where the compound itself is agreeable to the eye. For example, a light or bright red is a pleasing colour; hence white and clear dark red blend well. The same remark will apply to white and dark blue, a light blue being a fine colour. Bright red and pure yellow may be placed in contact, a clear orange being the result. But a dull dark red or crimson and yellow do not blend well, as the mixture is heavy; and yellow and blue are very unsuitable, as they produce a green by combination, a colour fine for leaves, but never admired for flowers.

It is believed that great improvements are yet to be made in floriculture, by the proper arrangement of flowers. Many establishments are enriched with rare and costly plants, only within the reach of the few.

But still fewer collections are enriched with that which money cannot buy—a skilful arrangement throughout, on the principles already alluded to. It is more desirable to be “profuse of genius” than “profuse of gold;” a garden of more common plants, displayed in the best possible manner, would excel one full of rarities, unskilfully jumbled together. The imprisoned artist, who amused himself, and showed his skill, by painting pictures with the sweepings of the house floor, showed himself infinitely superior to the sign painter, who, with the richest and most costly colours, executed only a gorgeous daubing. The finest and rarest trees, badly arranged, would, as a whole, fail to please; while a collection of more common sorts might, by taste and skill, be made to form a beautiful landscape. I do not see why the same principles may not be fully applied in the arrangement of a flower garden. Perfection in the latter will, undoubtedly, be longer of attainment, inasmuch as habit of growth, mode of inflorescence, colour, and time of flowering, are all to be taken at once into consideration.

It is not, of course, intended here to carry out these suggestions; but a few imperfect examples may serve for illustration.

The following common perennial rooted plants are tall, are in flower together the first days of summer, and blended, form a rich and brilliant group: Yellow *Hemerocallis*, Oriental and Caucasian Poppy, Orange Lily, and common double crimson *Pæonia*. The dark crimson of the Caucasian Poppy, in connexion with the clear crimson of the *Pæonia*, and these combined with the fine yellow of the *Hemerocallis*, by the intervening shades of the Orange Lily and Oriental Poppy, exhibit together a most splendid display. Among those less showy, and of smaller and lighter growth, the Blue *Baptisia*, the Red and White *Dictamnus*,

and the *Aquilegia canadensis*, flower at the same time, and sufficiently resemble each other to form a handsome and graceful group. The *Baptisia* being taller should be in the centre or back ground; and the *Dictamnus*, a smaller plant, in front. An almost endless series of groups may be made from the different Roses, which possess nearly all the intermediate shades from the black velvet crimson of the *Miralba* and *George the Fourth*, to the pure white of the *Snowball Rose* and *Bath Moss*. Superb displays of colours may also be made by forming the *Boursaults* into pillars of various shades, the crimson or purple of the *Old Boursault*, and the lighter and more delicate flame of the *New Crimson*, combining finely with the paler hues of the *Pink* and *Blush Boursaults*.

It will be observed that these are not always to be closely intermixed, but so as to form, in some degree, separate masses. Nature has sometimes provided for the same result, as for example in the changing hues of the *New Crimson Boursault* and the old *Single Michigan*. Some of the *Pæonias* exhibit a very fine appearance when properly planted together in the same bed. Even some shrubs may be trained low for this purpose. For example, the common *Snowball* (*Viburnum opulus*), if kept cut low, and planted near the *Double Rose Pæonia*, produces the finest effect from the similarity in the clearness of the colours, and the size of the masses of flowers, the clear red of the one contrasting with the pure snow white of the other.

J. J. THOMAS.

A CHAPTER ON PHLOXES.

BY JOSEPH BRECK, OF BOSTON, MASS.

It is a singular fact that many of our most beautiful indigenous plants are first known and cultivated in England; and that to English botanists and collectors of plants, we are in many cases indebted for a knowledge of their existence. With few exceptions, this has been the case with the very desirable and ornamental family of PHLOXES, a genus exclusively North American; yet until within a few years, we have been looking to the mother country, and receiving from her florists, new species and varieties to adorn our gardens. There is, however, a prospect that we shall soon be enabled to pay the debt of gratitude we owe them, with interest; for it is found that the *Phlox*, in its own congenial climate, when brought under the favorable influences of cultivation, freely sports into beautiful and improved varieties, superior in many cases, to those

produced by our floral fraternity in Europe. Notwithstanding the numerous new varieties that have been imported within the last few years, we sincerely believe that as many varieties, fully equal in perfection and beauty, have been produced in the same time by a few members of the Massachusetts Horticultural Society, in this vicinity.

The generic word *Phlox* is from a Greek word signifying flame. The plant so named by the ancients, is supposed to be an *Agrostemma*, a very different plant. Our *Phlox*, an American plant, was not of course then known. It belongs to Class *Pentandria*, (five stamens,) Order *Monogynia*, (one style,) of the Linnean system; and of Jussieu's Natural Orders, *Polemoniaceæ*, from *Polemonium*, its type.

The characters of the genus are, a three celled capsule; corolla salver-shaped, divi

ded into five segments, with a conspicuous tube, more or less curved; stigma trifid; a small, deeply five-cleft, calyx.

With the exception of *P. drummondii*, all the known species are perennials. This annual species, by the way, is the richest of all in its colours, as there are varieties of purple, crimson and scarlet, having a peculiar velvety appearance. There is also every tint of red, rose, pink, and variegated; and when the various sorts are intermingled in masses, they produce a surpassingly rich effect. It certainly stands at the head of all annuals. It continues in bloom at least three months.

Of all hardy perennials, we do not remember another family of flowers so prolific in the number of its species and varieties, so ornamental to the borders from May to November, so perfectly hardy and easily cultivated, and so freely propagated as the Phlox. When we are consulted in relation to the most suitable, ornamental, hardy herbaceous plants for the flower garden, as we frequently are, Phlox is always named first. Of this family alone, we could make a flower garden that would present, through the season, a succession of bloom that would ever be varied and interesting.

The species vary much in time of flowering, height, foliage and mode of inflorescence. The flowers in most species are arranged in panicles or corymbs, which are either elongated on the stem, or in terminal dense or loose panicles or corymbs, presenting nearly a level, spherical, or pyramidal top, varying in the different varieties.

The properties of a fine Phlox are not laid down in the floral books, as is the case with many flowers; but on account of the multiplicity of the varieties, and the necessity of discarding many old sorts, as well as rejecting new seedlings of inferior properties, we will give the criterion of a good va-

riety, according to our fancy: The corolla, which is salver-form, should be flat; the segments of the corolla perfectly free from any notch or undulation, of a circular form and rose-leaf edge, interlapping each other, so as to give the corolla a perfectly round shape. (In many of the varieties, the segments are wedge-shaped, which gives the corolla an open starry appearance—this is a great imperfection.) The corolla should have a long, slightly curved tube. The flowers should be arranged in a symmetrical corymb or panicle. If in a corymb, it should form a dense spherical or pyramidal head; the branches, which are scattered down the stem, should all rise in a regular manner, their flowers intermingling and forming the base of the pyramid or sphere. Most of the late sorts produce their flowers in corymbs.

The flowers of the early varieties are mostly in elongated panicles; in this case, the flowers should extend at least half the length of the stem to the top, forming a regular cone, well filled with flowers to the apex. The colour of the flower should be distinct; the flower is very much improved, in the light coloured varieties, when it has a red or purple eye, or if the flower is dark with a white eye: if white, it should be clear and without stain; if variegated, regularly striped.

The usual mode of propagating the Phlox, is by division of the roots, which in the early varieties should be done soon after flowering, in June or July. For the late sorts, the spring is the most suitable time. All the varieties succeed well from cuttings, which should be taken from the plants in the spring. They root very easily. This mode is adopted with valuable new varieties, when it is important to increase the stock as rapidly as possible. In the descriptions that follow, the species cannot always be recognized. Florists, with their novel seed-

lings, have made sad work for the botanist to arrange and systematize. It is impossible in most cases, to trace the parentage. The florist, however, is well satisfied to lose the distinction of species, in the production of improved and beautiful varieties.

The earliest species in the flower garden is *Phlox subulata* and its varieties; they are sometimes known by the name of Moss or Mountain Pink. There is a pink, white, and dark red variety, which display their pretty flowers from the last of April to the last of May, and completely conceal their yellowish-green foliage; they look well in large beds or masses. From these varieties, a number of improved seedlings have been produced, with larger flowers; one of them has lilac-coloured flowers with a dark eye; another has pink flowers with a red eye—These varieties are spreading, and extend themselves on the ground, and are not over 4–5 inches high.

PHLOX SETACEA NIVALIS. Snow-white.—The flowers are brilliant snowy-white, with orange in the centre; in bunches from three to five on the ends of the branches, completely covering the foliage, which is a shining deep green, and setaceous, (bristly,) about four inches high; in flower from the tenth of May to June. This species is rather tender, and generally more or less injured without protection; it is undoubtedly one of the most elegant of the vernal species. It has now disappeared from our collection; we had it formerly in great beauty and perfection. We have not seen it in any garden in this vicinity of late years, and should be glad to find it again.

PHLOX STOLONIFERA. Creeping Phlox.—The plant puts forth suckers or shoots near the surface of the earth, which take root similar to the strawberry runner: stem erect, eight or ten inches high, bearing a small cluster of large, deep red, finely formed

flowers, from the tenth of May to June. Leaves ovate, brownish-green. A lovely species, and worthy of cultivation.

PHLOX DIVARICATA.—Branches divaricate. This beautiful and distinct species produces its pale blue flowers the last of May, on lax decumbent stems one foot high. Leaves ovate-lanceolate. It does not propagate so rapidly as most of the species, and is not, therefore, quite so common. Mr. W. E. Carter, of Cambridge Botanic Garden, has exhibited a number of beautiful varieties, one of them a pure white.

PHLOX MACULATA.—Spotted stem. The dots upon the stem give it the specific name. It is one of the most common sorts, is found ornamenting almost every garden, and is sometimes known under the name of Flora's Bouquet. The flowers are perfect in shape, of a purplish-red colour, and arranged on oblong panicles or spikes, somewhat crowded. It commences flowering the first of June, and continues most of the month, and frequently blooms again in the autumn. Leaves lance-oblong, glabrous; stem rough, spotted. One and a half to two feet high.

PHLOX SUAVEOLENS. Sweet-scented.—It has sweet-scented, pure white flowers, arranged precisely like the last; leaves similar; stem without spots. Height and time of flowering the same as *maculata*, and considered by some a variety of it. When grown together, they produce a fine effect.

PHLOX CARNEA. Flesh coloured.—This delicate species is in flower the middle of June. After its first display, it continues to flower sparingly through the season. Corolla, fine round form; delicate flesh colour. Leaves ciliated; upper ones linear-lanceolate. One foot high. Stems from 3- to 5-flowered. Not a very common, but a beautiful species.

PHLOX LISTANEA.—A beautiful species

with deep red flowers; stems fan-flowered; 18 inches high. Radical leaves rhomboidal; upper ones ovate-lanceolate. Flowers in June. This has disappeared from our collection.

PHLOX VAN HOUTTEI.—A superb new variegated Phlox, with a fine corolla, each segment being regularly and distinctly striped with purplish-red on pure white ground. Flowers on elongated panicles, half the length of the stem. Height two feet. Leaves rhomboidal, nearly clasping, glabrous. In flower the last of June.

PHLOX PICTA.—A beautiful new white variety, with large reddish purple eye. Flowers arranged in loose pyramidal panicles; stem spotted; eighteen inches high. Leaves linear-lanceolate. Flowers in July. A very delicate and beautiful variety; the eye gives it a lively appearance.

PHLOX SHEPHERDIA.—Named in honor of William Shepherd, curator of Liverpool Botanic Garden. A beautiful variety, about two feet and a half high, with purplish-red flowers in elongated panicles; leaves lance-oblong, glabrous. Flowers in July.

PHLOX KEERMESINA ALBA.—Another fine new eyed variety. Corolla round, white, with light purple eye, arranged in loose pyramidal panicles of great beauty; leaves linear-lanceolate, glabrous. Two feet high. Flowers in July.

PHLOX MEECHANTEA SPECIOSA.—A fine new variety. Corolla white, beautifully tinted with rose; corymbs very branching; flowers arranged on the branches in elongated panicles. Leaves deep shining green, glabrous, lance-ovate. Corolla fine form. Three to four feet high. Flowers in July. A very desirable variety.

PHLOX NYMPHEA ALBA.—A fine new white variety. Corolla fine form, white, delicately tinted with purple; tube of corolla purple. Flowers arranged in dense spherical co-

rymbs. Leaves ovate-acuminate, somewhat spatulate at the base. Three feet high. July and August. Beautiful.

PHLOX PANICULATA ALBA.—A fine new variety, with pure white flowers arranged in pyramidal panicles. Stem three feet high, with lateral branches extending down nearly to the ground; they are nearly two feet in length, the extremities covered with flowers. Leaves four inches long, oblong-lanceolate, acuminate, spatulate, somewhat rugose, the margin slightly undulate. Flowers in August.

PHLOX LAWRENCII.—A new and beautiful white variety, raised by W. E. Carter, which we consider one of the best whites that has yet come under our observation. The flowers are large, fine shape, a pure snowy white, in large, dense, pyramidal corymbs, with lateral branches regularly arranged, increasing in length as they descend the stem, but not so long and straggling as in the last described variety. Leaves seven inches long, lanceolate, acuminate, glabrous. From three to four feet high. Flowers in August.

PHLOX FRELINGHUYSEN.—Another beautiful seedling of Mr. Carter's, with variegated flowers in dense pyramidal corymbs: light purple and white, finely pencilled in irregular stripes. Leaves lanceolate, spatulate, glabrous. Three feet high. August.

PHLOX ACUMINATA.—A distinct, fine old species, with purple flowers in a very dense spherical, terminal corymb or panicle. Leaves spatulate, ovate-acuminate, a little scabrous; upper ones lanceolate. Three feet and a half high. July and August.

PHLOX HENRY CLAY.—A beautiful seedling of Mr. Carter, with very large, fine white corolla pencilled with purple; tube of the corolla also purple. Flowers in pyramidal corymbs. Leaves lanceolate-acuminate. Flowers in August.

PHLOX MARY ANN.—A superb new variety with striped flowers; corolla fine shape; about one half of each segment (the centre part of it) is of a clear pale purple, while the margins are pure white; in dense flattish corymbs. Leaves lanceolate. A foot and a half high. August.

PHLOX BRECKII.—Raised by the writer; and one of the first seedlings produced in this vicinity that attracted attention. A very desirable variety, on account of its being one of the best late flowering varieties. In perfection in September. In good ground from five to six feet high. The corolla circular, light purple, with a white eye. Flowers in long and graceful pyramidal corymbs; the lateral branches short. The foliage graceful, lanceolate, acuminate-spatulate; the upper leaves very much undulated. Stem reddish.

PHLOX WILDERII.—Another fine variety raised by the writer. Corolla very round and perfect; the color a fine deep red—one of the best reds in the whole family, and not changeable, as is the case with some of the reds and purples, in a storm of rain, or when covered with a heavy dew; in elongated pyramidal corymbs. Leaves five inches long, lance-ovate, acuminate. Three feet and a half high. August.

PHLOX RICHARDSONII.—A fine tall-growing variety, with bright red flowers, fully equal to the last in brilliancy of colour, but the corolla rather too starry. Stem very much branched in large pyramidal corymbs or panicles. Leaves lance-ovate, acuminate. Four to five feet high. In August.

PHLOX HARRISONII.—A seedling raised by W. E. Carter, with clear transparent white flowers. Thought to be very fine when first exhibited a few years since, but eclipsed by *P. lawrencii*. Five feet high. August.

PHLOX PYRAMIDALIS PURPUREA. *Purple Pyramidal Phlox.*—Considered ten years

since to be very fine; but is now discarded on account of its starry open corolla. Flowers purple, changeable to blue in damp weather; flowers in pyramidal corymbs. Four or five feet high. August.

PHLOX PYRAMIDALIS ALBA.—Flowers white, inclining to pale lilac, very starry and little thought of now, although very rare and highly prized ten or fifteen years since. Habits like the last.

PHLOX WHEELERII.—A pretty variety, with pink flowers and red eye, but small and irregular in shape, and hardly worth keeping in a choice collection. It has some good qualities, being in flower most of the season. The flowers are arranged in large flattish corymbs. Three feet high. June, July and August.

PHLOX CORDATA GRANDIFLORA.—One of the finest varieties. Corolla very large, fine round shape, purplish-pink with white centre, in large, flattish, dense terminal panicles. Leaves ovate-lanceolate. Five feet high. July and August. We could never discover any thing cordate (heart-form) about it, and have been at a loss to know why that term should be attached to the name.

PHLOX HUMANII.—A fine new variety, with lilac purple flowers, good shape, in oblong panicles, without lateral branches. Leaves five inches long, glabrous, broad-ovate at the base, almost clasping, tapering off lance-form. Two feet and a half high. July and August.

PHLOX DECUSSATA ALBA.—A very fine white variety. Corolla very perfect; flowers in regular compact pyramidal corymbs: occasionally some of the flowers incline to blush. Leaves lanceolate, spatulate-acuminate, upper ones very much undulated. Lateral branches short, arranged very symmetrically. Three feet high. August.

PHLOX ARTABANUS.—A new dark red va

riety. Corolla round; flowers in compact pyramidal corymbs. Dwarfish in habit; a foot and a half high. Leaves ovate-lanceolate, acuminate. August.

PHLOX ALMERINE.—A new variety. Colour bluish with a white eye; corolla small, but good shape; in fine pyramidal panicles. Two feet high. August.

PHLOX NANA.—A new dwarf variety, with small red starry flowers in large dense corymbs. Too inferior to cultivate. One foot high. August.

PHLOX PANICULATA.—A distinct species of long standing—an old acquaintance which we feel unwilling to discard, notwithstanding so many superior varieties have superseded it. Flowers in compact terminal panicles, head inclining to one side; corolla large but irregular shaped; colour fine pink. Leaves lanceolate, flat, margins rough. Four feet high. August.

PHLOX CHARLES.—A fine new white variety, with pink eye. Corolla fine shape. Flower in pyramidal corymbs. Dwarf habit; one foot and a half high. August.

PHLOX UNDULATA.—One of the latest species, a native of the south. Stem erect, smooth, three feet high; flowers red, frequently changing to white, as the nights become frosty. Leaves lance-oblong, slight-

ly undulated. In short seasons, it hardly develops its flowers, but is perfectly hardy. September and October.

The numerous varieties we have thus noticed, have been described from specimens in our own collection. We have also quite a number of beautiful new varieties, which, on account of a kind of blight that has attacked them, have not developed themselves this season. We shall not attempt to describe what we have seen imperfectly. MESSRS. WALKER, HOVEYS, WARREN, and other florists, have severally produced fine seedlings that have been exhibited, but no particular descriptions given. The writer has also a number of superior varieties of his own raising, an account of some of the best of which may be given hereafter.

This chapter on Phloxes has already been extended too long, not only for your readers but also for myself. I came near forgetting a magnificent specimen of a new variety exhibited by the President of the Horticultural Society, at our rooms on Saturday last. It is an eyed variety of great beauty; corolla large, white, with a large brilliant purple eye, called *Phlox œil de lynx*, or lynx-eyed. We are not acquainted with its particular habits.

JOS. BRECK.

REMARKS ON HEDGES.

BY WM. R. PRINCE, FLUSHING, L. I.

FROM various considerations the public attention has been of late years called to the formation of fences composed of living trees or shrubs, and I therefore venture some comments on this subject.

In Europe, where the forests are of limited extent, in comparison with the demands made upon them for building houses, ships,

&c., a great degree of economy is necessarily exercised in their use and preservation. For this reason, forest trees are there but little used for fencing; and ditches, embankments, and live fences, have been adopted for the formation of lines of subdivision between fields and estates, and for the boundaries of roads, &c.

In our own country, where the forests afford a superabundance of timber, we have made a general use of that article, in various forms, for our fences. But however cheap this latter article may be with us, it is a question whether it is equally economical with a live fence; and it is certainly very far inferior to it in point of beauty and durability.

There are also some sections of our country, in which even the advantage of superabundance of forests does not exist, and this is so much so in the prairie states of the West, that the most important object to them is the cost of fencing their lands. Our country is now becoming wealthy, and very many persons, even in those states where forests abound, are inclined to devote attention as well to the beauty of their enclosures, as to the economy of their arrangement.

Few persons can conceive the enhanced beauty that live hedges impart, when contrasted with the gloomy post and rail fences with which our farms abound. In England and France, where live fences are generally adopted, they impart, at the floral season, a degree of enchantment to the scene; and at all periods, they serve to greatly enliven the landscape scenery of those highly cultivated countries. Live hedges also afford great protection against severe winds, and they may be trimmed so as to occupy as little or as much space as suits the proprietor.

In England, the Hawthorn is most generally planted for this purpose; and the snow-white flowers of the ordinary variety, interspersed here and there with a tree of the pink and the crimson Hawthorn—these latter being allowed to rise above other portions of the hedge—impart a degree of beauty that can scarcely be surpassed. The Italian Privet is a more beautiful shrub for

a hedge than the Hawthorn, and in France is far more generally adopted for this object. Its growth is much more rapid; its foliage myrtle-like and beautiful; and its spikes of snow-white blossoms, rising amid the luxuriance of foliage, neat and chaste in the extreme. It has also the advantage of being a subevergreen, holding its foliage very late, and in mild climates, during nearly the whole winter. As the Hawthorn produces its flowers in May, and the Privet in June, it would be a pleasant arrangement to form a hedge composed of sections of each.

The Buckthorn is much used for hedges in the vicinity of Boston and Salem, and is well suited to the object. The Maclura or Osage Orange, is used for the same purpose in the vicinity of Philadelphia and south of it; but, being a southern tree, it will not be found appropriate for the northern and eastern states.

The *Pyracantha*, a subevergreen, is perfectly hardy, and forms a beautiful hedge, blooming in May, with flowers assimilating to those of the Hawthorn, and clad in autumn and winter with profuse clusters of scarlet berries, which have entitled it to the cognomen of "Burning Bush."

Evergreen hedges, of the most beautiful description, are formed of the *Arbor Vitæ*, the American, Siberian and Chinese species being used for this purpose. They form, after a few years, most admirable appendages to pleasure grounds, and may be used to equal advantage for fields of any extent. The American and Siberian species being the most hardy, are the most appropriate for latitudes north of New-York; but in the vicinity of New-York, the Chinese flourishes admirably.

The Swedish and the Irish Juniper form fine evergreen hedges; and even the common Red Cedar may be used for the same

object ; but the hedge is not, in either case, equal in beauty to those of the Arbor Vitæ. The Norway Spruce, an exceedingly robust and hardy tree, forms a beautiful hedge, and is admirably suited to the northern and eastern states.

The different species of the *Xylosteum*, or Upright Honeysuckle, are very hardy shrubs, and will form very neat deciduous hedges for the North, or any section of the Union ; and for the vicinity of New-York, and all the region south of it, the *Euonymus*, or Strawberry Tree, the *Althea frutex* of different varieties, the *Syringa* and *Lilac* of different species and varieties, the *Snowball* and the *Deutzia scabra*, may be used, and are almost invariably of rapid growth.

For the prairies of the West, and for the subdivision of lands, where the space occu-

pied by the hedge or living fence would be deemed of little importance, the most rapid growing trees are the Honey Locust, *Gleditschia triacanthus*, and the Yellow Locust, *Robinia pseudacacia*. These will, in three years, form an impassable hedge, and if the timber or wood is required for use, they may be cut off from time to time, at any desirable height ; and they will rapidly replace by a new growth, whatever is taken from them. In open prairie lands, they would afford a most desirable shelter for cattle, horses and sheep, in pasturage, and could not fail to greatly enhance the value of lands where timber is scarce and desirable, by at all times affording a supply from the surplus growth. WM. R. PRINCE.

*Linnean Botanic Gardens and Nurseries, }
Flushing, L. I., July 25, 1846. }*

PRETTY ANNUAL CLIMBING PLANTS.

BY AN AMATEUR FLORIST, N. Y.

If any one has a bare and meagre garden—if any one has a new garden which time and labor has not yet stocked—if any one has an old garden, which is hard, stiff and ungraceful—let him address himself to *vines* and *climbers*.

Nothing in the vegetable kingdom is so full of grace and luxuriant beauty, as are the different kinds of vines. They have, in fact, the very *poetry* of growth, in their endlessly varied forms—now clambering boldly over the tallest trees—now creeping humbly over the earth ; in some species, waving to and fro like plumes in the air ; and in others, binding together the ruins of some old and time-hoary edifice.

I do not mean, at this time, to weary your readers with an account of all the various tribes of climbers, which are now known

to the gardener. I only wish to speak to beginners of two or three pretty little annual vines, that should be favorites every where ; that are very easily raised ; and that will give something of grace and beauty to every little plot of ground, even if it is not worthy of being called a *garden*.

One of these little favorites is the plant popularly known as the Canary-bird Flower, *Tropeolum peregrinum*.* It is a native of Peru, and is one of the most popular of climbers in all the Spanish gardens of Lima and New-Grenada. Its Spanish local name is *Paxaritos amarillos*, i. e. yellow birds. When the charming little canary-colored blossoms are half expanded, they certainly have a pretty and fanciful likeness to tiny birds.

* *T. aduncum*, of some botanists.

This plant is really a most delicately moulded species of *Nasturtium*, and like



Fig. 38. *The Canary-bird Flower.*



Fig. 39. *The Brick-red Lousa.*

the type of the genus, has a fine luxuriant, rambling character. When the seeds are planted in April, in light border soil, by the side of a trellis or arbor, the plants will speedily cover several yards with their small

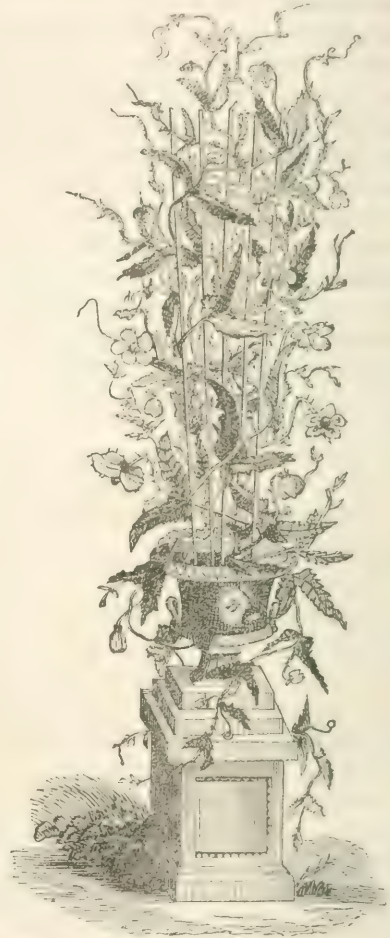


Fig. 40. *Loasa pentlandica.*

and pretty foliage, and lively and curious blossoms. It will there bloom most abundantly from July till the severe frosts of autumn destroy it.

Another plant, which is well worthy of a place in the garden, and thrives wonderfully well under our summer sun, is the Brick-

red Loasa, *Loasa lateritia*. It is a native of South America, and was discovered and sent to the Glasgow Botanic Garden in 1836. As it bears seed most abundantly, it soon found its way into many collections. Its blossoms are very curiously shaped, scarcely less so than those of the Passion Flower. They are prettily colored, between a brick-red and orange shade, and they are produced all the summer and autumn in profusion. The seed-vessel, which follows them, is one of very striking appearance as I remember—a grotesquely twisted cylindrical capsule, with spiral ribs. The seeds of this annual climber may be sown about the first of May, in a warm border. It will run from twelve to twenty feet in a season, and, trained over three stakes, soon forms a fine pyramid of leaves and blossoms.

There is a fine new species, *Loasa pentlandica*, more tender than this, figured in Paxton. We give its portrait to show the habit of the plant, which, indeed, is much the same in all the species of this genus. It is, perhaps, well to add that a remark that Mrs. Loudon makes, and which I have found very true, should be borne in mind, when admiring the *Loasas*, “no lady should attempt to train a *Loasa* without gloves.” The truth is, the leaves have, in hot weather, a little of the nettle quality—slight, it is true, but enough to annoy a person a few moments who carelessly thrusts his hands among them.

I ought not to forget among my three or four sorts, that most delicate and pretty of all annuals, the well known Cypress Vine, *Ipomea quamoclit*. There is nothing more airy and delicate than this little beauty,

which is a native of the southern parts of the United States. Its minutely divided, deep green foliage, and bright crimson or white star-like blossoms, render it universally admired. I have never seen this plant trained to show it off to so much advantage, as at the Highland Gardens last season, on a little pavilion. It had quite a fairy-like appearance. Some persons complain of the difficulty of growing this annual. The difficulty is only in its *germination*. I sow mine

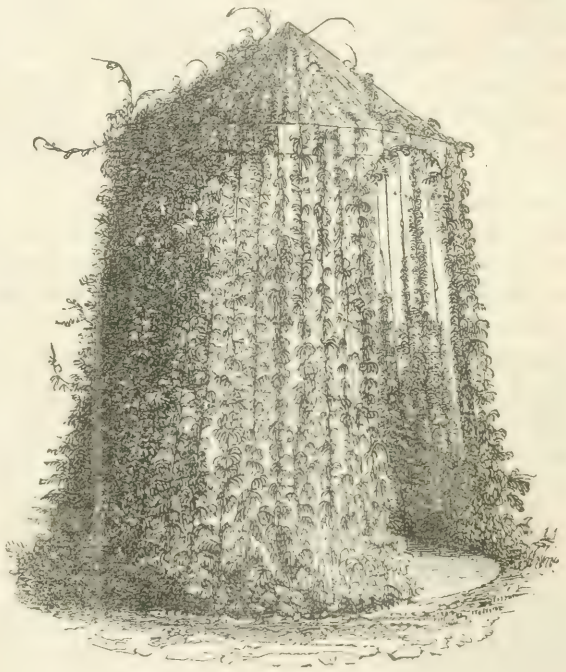


Fig. 41. A Cypress Vine Pavilion.*

about the tenth of May, in rich soil, having previously soaked the seeds four hours in tepid water. Every one vegetates uniformly, when the seeds are good.

I may, perhaps, continue these remarks at a future time, with notices of other climbers. I will only add now, that for those

* Fig. 41 shows this simple and pleasing mode adopted by us.—ED.

who want something of strong and handsome growth, to cover a large space rapidly in one season, there is, perhaps, nothing so good as the Climbing Cobea, *Cobea scandens*. It is very luxuriant, and will often make

shoots forty feet long during the season, from June to November. Its blossoms are somewhat like large purple Canterbury Bells, and it has altogether a very agreeable effect.

Yours, AN AMATEUR FLORIST.

Remarks on the Black Wart of the Plum Tree.

BY JOHN M. IVES, SALEM, MASS.

In a recent number of the Boston Cultivator, there appeared a reply to the question of a correspondent, "*for a remedy for warts on Plum trees*," in which the editor recommends the use of salt, and cites the practice of Dr. S. A. SHURLIFF of Brookline, who, he says, "excels in raising plums, his trees being free from black warts," etc. I may fairly claim to have had some experience with salt, as I have probably used as much or more of this article in the cultivation of the plum as any individual, having applied in February, 1845, *five hogsheads on an acre*, and the year previous about one-third of this quantity; and for the last two seasons, my trees have produced greatly, particularly the Green Gage Plum.

My main object, however, in writing you at this time, is to give you an account of my trees as they appeared this spring. Soon after the flowering season, I observed a great number of the warts or excrescences, of a light brown colour, upon the branches, (in many cases, to an extent of at least ten inches in length,) breaking out generally upon the joints. They are not confined to those shoots of small growth, but I find them upon strong and weak shoots indiscriminately. I have carefully cut at least fifty of these excrescences, and *have not been able to detect a single worm or insect*. That an insect may be sometimes found in these knots, would not be surprising, as they are of a softer na-

ture when they first appear than the bark, and insects may then find it a good situation for their eggs. But I do not believe they are produced by one, and least of all the Curculio. My fruit has been most satisfactorily preserved for two years past, from the Curculio, by the use of salt.

The varieties of plums which have been the most affected by knots this season with me, are the Frost Gage, Prince's Imperial, and the Red Gage; the Green Gage but little affected; Roe's Autumn Gage only somewhat touched by the disease. Those not at all affected are Dana's Yellow and the Wilkinson Prune, a large oblong blue free-stone, a native of Beverly, Mass.

I ventured to suggest, in the "Book of Fruits," that these knobs may be produced somewhat as the excrescences are, which we find upon the Azalea or Swamp Pink, by an extravasation of sap. My *opinion*, (and we all have a right to that,) now is, that it is caused by a *diseased state of the sap*; and as Governor Lincoln said of the potato rot, "it is death to the plant at last, if not cut off." I trust that the Horticulturist will contain the opinions of your cultivators and yourself on this subject. I have cut from about fifteen trees as much as could be wheeled in a common garden barrow, of limbs, &c., containing these unsightly excrescences. Yours truly, JOHN M. IVES.

Salem, Mass., July 20, 1846.

REMARKS.—Two of our correspondents, who are very acute observers and zealous cultivators, are pursuing a series of experiments with a view to clearing up the uncertain state of existing information respecting this disease, which is fatal to the Plum tree in some parts of the country. We hope by the close of this year, to be able to lay before our readers some interesting results on this subject.

If we recollect rightly, Dr. SHURTLIFF'S practice was the application of brine to the wounded branch, after the wart had been cut out.

The Plum is naturally a marine tree, and it is surprising how much salt it will assimilate and thrive upon. We have, ourselves,

given a single large tree a half bushel of salt in a season, applied to the surface of the ground in the spring, over an area as wide as the extent of the branches. The tree was in a sickly and enfeebled state, and it had the effect of restoring it to a healthy and luxuriant condition. But we considered this an extreme case, and should not recommend the abundant use of salt every year.

Mr. IVES' garden, as we know, is rather celebrated, in a neighborhood not remarkable for plums, for its abundant production of this fruit; and he attributes it to the destructive effects of the salt on the Curculio. This coincides with our own experience.—Ed.

Hints respecting Plants which will grow in the Shade.

BY J. JAY SMITH PHILADELPHIA.

DEAR SIR—"The Horticulturist" satisfies all expectations, and its complete success is already certain. It was indeed greatly needed, and will help many to new ideas, and more to the most admirable improvements.

Little hints that every one acquires in the course of his own experience, must be useful to others, especially to beginners of whatever age. For instance, I might have spared myself much trouble, if I had known that beneath the shadow of an English Walnut is a very unwholesome place for tender plants. My remarkable success with roses at Laurel Hill Cemetery, noticed by your correspondent in your first number, may be attributed to a casual remark met with in the course of reading, and which I have never since seen repeated in books, that Rose bushes require "to have their feet kept dry;" i. e. to have a deep and well drained

subsoil. In consequence of this, I uniformly, before planting, dug deep to the gravel, and placed brick-bats or broken pots below. The result, with a favorable exposure, and on high ground, is very remarkable, several kinds having attained a size not previously observed elsewhere.

A little information as to the kinds of plants that will and *will not* grow in the shade, is an important item in ornamental gardening, which I should be glad to see treated by an experienced gardener. I give a list of a few which I find succeed well in the shade.

All the *Rhododendrons* and *Kalmias*. Indeed these finest of evergreen shrubs will not succeed under garden culture in the sun. What fine specimens of the different *Rhododendrons*, *maximum*, *catarbiense*, &c., are growing in that finest of old *arboretums*, the Bartram Botanic Garden, near this city.

There they have a damp situation, partially shaded by lofty trees. Their dense masses of broad leaves form fine heads of eight or ten feet in diameter—in June beautifully laden with large clusters of blossoms.

Hedera helix, or *English Ivy*. We so seldom see the Ivy doing well at the north, because it is planted generally in a warm southern aspect. Put on the north side of a building or tree it will soon cover a large surface. It is the most charming of climbers when established on a wall.

Ilex aquifolium, and *opaca*, or *Prickly-leaved* and *Opaque-leaved Holly*, the best plants for hedges in the world.

Aucuba japonica, or *Japan Gold Dust Tree*. This plant is not sufficiently known among us. Immense use is made of it in England; its evergreen leaves, variegated with angular yellow spots, are beautiful at all seasons. Perfectly hardy at Philadelphia.

Buxus, or *Box*, bushes and trees. All the varieties are successful in the shade. The Tree Box is too little cultivated. There are some venerable specimens on the estate of the late Judge PETERS, near Philadelphia, twenty and thirty feet high. Those who plant for posterity, should remember the Tree Box and the

Taxus, or *Yew*, which, though slow, will reward even the beginner by its peculiar tinge of green, and the wax-like beauty of its coral berries. The Upright Yew, I found in England, was left to its natural shape, and was never trimmed; it is always beautiful.

Thuja occidentalis, the *American Arbor Vitæ*—much to be sought for, for hedges. I know no finer specimen of this plant than the semi-circular hedge in your own grounds;

but the man who first shows a *Holly hedge* of any extent, will be best entitled to be remembered.

Daphne mezereum. This prettiest and earliest of spring flowering shrubs does best in the shade. Indeed it often dies very suddenly if grown in a sunny exposure.

The *Bloody Dogwood*, (*Cornus sanguinea*), and the *Parsley-leaved Zanthorhiza*, are capital under-wood plants for shrubberies. The common *Privet* is, perhaps, one of the very best plants to grow under the drip of trees. Even in confined places in cities, where nothing else will thrive, the *Privet* grows exceedingly well.

The *Snowberry*, (*Symphonia racemosa*), and the *Indian Currant*, (*S. glomerata*), are scarcely less patient of the worst situations and exposures.

Juniperis communis, or *Common Juniper*, will do well in moderate shade.

The *Lily of the Valley*, and the *Periwinkle*, will be best in shade, and I have found many of the genus *Phlox* to bloom without a ray of sunshine. Among other herbaceous plants, I will only name here the *Moneywort*, (*Lysimachia nummularia*), the *London Pride*, (*Saxifraga umbrosa*), the *Sweet Balm*, (*Monarda didyma*), and the *Anemone pennsylvanica*.

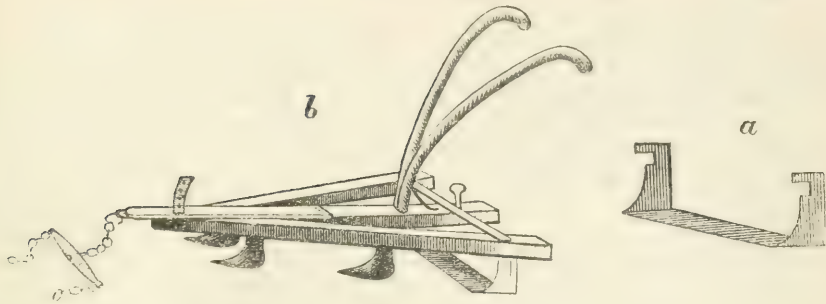
Now if I had known even this much, at the commencement of my gardening labors, I might have saved much time and expense. Will you not, as the lamented LONDON used to do, give us lists of plants suitable for particular situations, and tell us what is hardy, and what will not bear our winters.

J. JAY SMITH.

Philadelphia, July 20th, 1846.

GUANO FOR PEACH TREES.—W. W. Mills, Smithtown, N. J., on the first of June, removed the earth from the roots of his peach trees, destroying the worms, then sprinkled

a handful of guano about the roots, wetting it and covering it with a peck of pulverized and wet charcoal. The trees, sickly before, then ripened their fruit in great perfection.



THE HORSE SCUFFLE HOE.

BY ALLEN W. DODGE, HAMILTON, MAS.

LABOR-**SAVING** machines are valuable to the horticulturist, especially such as will enable him to subdue weeds, and cultivate among trees, with the least expense and the most effect. The scuffle hoe is, in this respect, a great improvement on the common hoe, doing its work more thoroughly, and with far greater dispatch. For the same reasons, the cultivator, when used for stirring the soil, is a far more valuable implement to the horticulturist than the plough. But I have lately met with an instrument, which I have used the present season with great benefit in cultivating in nursery rows, and which combines the properties of the scuffle hoe and of the cultivator. It is simply a cast iron scuffle hoe, of the same width as is the cultivator, on a line crossing the two hind teeth, with prongs or fastenings similar to those of the teeth, and is designed to take their place in the cultivator. It is represented in the cut *a*, and its appearance, when affixed to the cultivator, in the cut *b*.

It will readily be seen that with an implement of this description, the earth is

loosened by the cultivator teeth, and that every weed which escapes them, is effectually cut up by the scuffle hoe in their rear. If the rows through which it passes are on a straight line, by passing twice between them, and running it near the trees, the work of destroying the weeds is so well done, and the ground is left in so smooth a condition, that a hand hoe is hardly needed to complete the operation.

Of course, great care is to be exercised in using this instrument, as well as the mere cultivator, that no wounds are inflicted on the trees. For this purpose, a short whipple-tree should be used, and the ends of it should be enveloped in list or woolen cloth. All wounds to the bark of young trees are exceedingly injurious, retarding their growth, and leaving scars which last for years. A severe hail-storm, which visited this region the last of June in 1840, scarred a large number of thrifty apple trees in my nursery, which were making their first year's growth from the bud, so that the wounds are conspicuous to this day.

ALLEN W. DODGE.

REVIEW.

THE HISTORY AND ART OF WARMING AND VENTILATING Rooms and Buildings, by open fires, stoves, steam, hot water, &c., &c.; with notices of the progress of personal and fireside comfort, and the management of fuel. Illustrated by two hundred and forty figures. By WALTER BERNAN, Civil Engineer. 2 vols. 12mo. London. 1845.

AN admirable work in two volumes, on the important subject of warming and ventilating. No man, who builds or lives in a house of any kind; no man who has suffered from smoky chimneys, fireplaces that waste fuel, or stoves that render wholesome air impure, will fail to derive much useful information and many practical hints, of real value in every day life, from these two small, but well filled volumes.

As a people, we still know nothing about ventilation. One has only to travel in our crowded steamboats, where three hundred persons are content to lie down together, like cattle, in the stifled atmosphere of a narrow cabin, which, as a sleeping apartment, would contain wholesome air enough for barely a dozen people; or over railroads in winter, where thirty or forty thrust themselves in a car, with a fiery little anthracite *salamander* burning up what little oxygen may remain in the atmosphere there, after being continually breathed over; or be a victim in that worst of all places, a lecture room or concert room or church, when some extraordinary attraction has drawn a "full house,"—to know that the sovereign people, who *have* learned something of the value of *pure water*, so as to pay, cheerfully, millions for Croton and Schuylkill, have not yet been brought to acknowledge the *indispensable* necessity of pure air.

It is certainly one of the most important of the "Rural Arts," to know how to build a dwelling-house, so as to attain the maxi-

num of health and comfort within its walls. The general ignorance on many of the all-important subjects embraced in these volumes, is deplorable. We never met a country mason, who really understood the principles which govern the draught of chimneys, and consequently half the chimneys in the country smoke grievously. Not one in a hundred can set a grate, so that the largest part of the heat does not pass into the chimney. Not one person in a thousand knows the principles necessary to the successful ventilation of a large and crowded public building.

The subject of warming and ventilating is very fully presented to the general reader by Mr. BERNAN. His style is lively and graphic; and he conveys instruction without the tedious technicalities which some writers on these topics have indulged in. The work comprises in its plan, a very complete and interesting account of all the principal modes of warming and ventilating from a very early date down to the present time; and there is a vast deal of instructive matter, pleasantly and ingeniously conveyed, regarding the domestic life and habits of our ancestors. Our limits will not allow us to enter into any of the details of this work, but we quote the following, to draw the attention of our readers to the importance of a well regulated *artificial climate*—we mean the climate of a properly warmed house.

"Anciently, Buckinghamshire was overgrown with wood, until it was cut down to prevent its harboring the robbers, with which the district had become infested. But the remote effect of denuding the land has been to dwarf its people, if not somewhat to dull their wit. In the county of Lancaster, says Sir Gilbert Blane, (*Medical Dissertations*,) the great abundance and cheapness of fuel is extremely favorable to life, health, and comfort; and he thinks it is owing to this advantage that the inhabitants of this district, particularly the females, have become noted for their well-formed persons

and comely countenances—forming a contrast with those of Buckinghamshire, where fuel was exceedingly scanty and high-priced before the extension of inland navigation, so that the laboring classes suffered extreme hardship from this privation, and are of a stature so inferior, that militia-men, by act of parliament, are admissible at a lower standard than in the rest of England. To the ancient profusion of peat, coal, and wood, throughout their generally bleak and exposed country, has been attributed the acuteness and activity that proverbially distinguish the personable stalworth natives of Yorkshire. Their average height exceeds that of Devon and Cornwall men, who live in a much milder climate. The Irish having very impolitically destroyed their woods, says King, and stone-coal being found only in a few places, they could hardly live without some bogs. These, however, covered a tenth part of the country in the doctor's time. That the national fuel is still plentiful, and near every man's door, is seen in the prevalence of masculine forms, and an oriental cast of mind, among his countrymen. The Russ-Slavon is of a middle size, clumsy, but vigorous; the Pole-Slavon, from the influence of superior climate, and a less stinted supply of firing, is taller and more graceful. The Norwegians are a well lodged people. The poorest dwelling has a wooden floor, glass windows, and an iron *kakle* or stove. Though living in a more inclement region, yet, from their greater dexterity in the production of indoor climate, they are a better grown race than the northwestern Scottish Highlanders, among whom fuel formerly was procured with great difficulty, and consumed as now, in the rudest and most unthrifty manner. In France, enjoying a warmer sun, but where the inhabitants endure much privation from a scarcity of firing, the average height of a man, according to M. Quelet, does not exceed five feet four inches. In the Netherlands fuel is more plentiful and easier procured, and there the average height rises to 5 feet 6½ inches, and in England, that has an abundance of coal, the average height is upwards of 5 feet 9 inches. In spite of the obstacles arising from the rigor of their seasons and uncleanly habits, the Swedish peasants attain a healthy maturity, and appear characterized by sturdiness of form, and the most athletic stature; many of them seem to belong to a race of giants with nerves of iron.* Their inexhaustible forests make fuel abundant; and they use their store with skilful economy.

The effect of artificial heat on the great scale, in ameliorating climate and improving the general health of towns, is also most remarkable. It almost reverses the order of nature, and makes a town most healthy, when its atmosphere appears to be the most insalubrious. Notwithstanding the palpable contamination of the air, from the immense volumes of deleterious gas that issue from its myriads of chimneys, and the numberless other sources of pollution to which its dense population are exposed, the greater healthfulness of London, when compared with the country, in winter, is a fact that may almost be considered as established by experiment; and which has been accounted for

from the higher degree of warmth that is maintained in every house by more numerous fires, from the radiation of heat from their walls into the street, and from the better ventilation which this agency produces. Yet, with this advantage, who can deny the frightful waste of health and life produced in a large portion of its population, through living in ill-ventilated apartments, often fatally aggravated by noxious exhalations from putrid decomposing matter in drains and in streets. But in truth, the same causes are producing the same suffering and mortality in town and country every where.

Leaving Falconer and his disciples in possession of their dogma, that governments may stamp the manners, but it is the air they breathe which moulds the form, temper, and genius of a people, if we may go so far with the ingenious enthusiasts as to admit, that warmth exerts a considerable influence on our physical, if not also on our mental condition, the *formation and regulation of artificial climate*, will then assume the character of an art for developing and expanding the mind and the body, for preserving health, and prolonging life; and the skilful practice of the art, as a means of saving fuel, will become essential not to the well-being only, but to the existence of many communities.

It is obvious, for example, that if fuel in Buckinghamshire had been used with perfect skill, no other way remained of removing the general starvation than to procure, if they could, the aliment of fire in greater quantity; but if the ancient mode of burning coal or wood were the same as that practised now, then it is certain that four-fifths of its effect was thrown away. By a more perfect mode of using firing, therefore, its effect might have been made five times greater, which would have been the same thing as making wood or coal five times more abundant. By skilful management of their scanty supply, the people of Bucks would have been as tall, and have enjoyed equally robust health, equal chance of long life, and equal comfort, with the inhabitants of Lancashire; and their maidens would have been as distinguished for their shape, symmetry, and pleasing faces, as the northern beauties, whose personal attractions were developed and preserved by burning five times more coal. Nay, if the Lancastrian women themselves, amidst their wealth of fuel, had studied its economical application, and used a fifth part only of what they did, then, instead of encountering the fierce extremes of heat and cold every time they approached their blazing fires, they would have moved in an equally warmed and genial climate, with exemption from diseases, engendered by noxious currents of cold air, that destroy some of the fairest works of creation in the county palatine and throughout our island. 'O, happy Laplander,' exclaims Linnæus, 'you live contented, in your sequestered corner, to a cheerful, vigorous, and long extended old age, unacquainted with the numerous disorders which constantly infest the rest of Europe. You live in woods like the fowls of heaven, and neither sow nor reap, yet the beneficent Deity hath provided for you most bountifully. Your drink is the crystal stream; your food, in spring fresh-taken fish, in summer the milk of the reindeer, in autumn and winter the ptarmigan and the rein-deer's flesh, new-

* Clarke. Travels in Scandinavia, p. 109.

ly killed; for you use no salt, neither do you make any bread, and are a stranger to the poisons that lurk under honeyed eates." How miserably is this fine picture of polar happiness destroyed by the disregard or ignorance of the art of ventilation! *Lappa, tippi saut*, quaintly observes their philosophical admirer. The noxious smoky cottage afflicts the whole nation with the only disease to which it is subject—blear eyes. In the Greenlander's anxiety to save all the heat which the extravagant man of Lancashire throws away, he loses sight of the baneful action of a putrid atmosphere on his constitution. Yet, with a little ingenuity, he might ventilate his unsavory apartment, and breathe an air as pure as that blowing over his ice-fields, and as bland and balmy as if it were wafted from the bay of Naples; and though cast by fate into the snowy wilderness, his body and mind feeling the heavenly influence, might assimilate to the godlike standards of his species in the incense-breathing south. By a proper application of the non-conducting powers of a few substances, an apartment might be constructed for the Norman women, who chose to club their own heat, in which, by burning the same weight of tallow during day that is consumed in candles during night, the presence of the milky mothers might be dispensed with, the lace-making operations be carried on in sunlight, and in a more pleasant atmosphere than that of the cow-house. Even the Scottish, Irish, Polish, Russian, Caucasian, Grecian, Spanish and Persian dwellings, might have their atmosphere sweetened, their dangerous inequalities of temperature regulated, and the benign influence of natural climate be aided and infinitely increased withal. It should never be overlooked, that by breathing pent-up, effete air, all the advantages of an abundance of fuel, and every blessing of a genial sky are utterly thrown away; and though the habitation were on the hilltop, fanned by the sweetest breezes of heaven, it would become the focus of contagious and loathsome disease, and of death in its most appalling aspect. On the other hand, even in the confined quarters of a crowded city, rife in malaria, and where pestilence is striking whole families and classes, ventilation and warmth, with cleanliness, their usual attendant, like the sprinklings on the lintels and doorposts of the Hebrew dwellings, stand as a sign for the Destroying Angel as he passes over to stay his hand, for in the warm, fresh-aided chamber none may be smitten. [P. 17.]

In the chapter on the effects of artificial temperature upon invalids, some very curious details are given of the singular mode of treating consumptive patients, by placing them in a cow-house; of which we have before more than once heard similar accounts:

"After an illness, says Madame Mezeray, during which I took little care of myself, I fell into a consumption. At length I spit blood in clots, and had other bad symptoms. I lost my sleep; and being as ill as possible, I had several consultations

with the first physicians in Paris. They concluded my complaint was too far advanced to leave any hope of a cure; but they prescribed ass's milk, and exercise on horseback; which last I was too weak to take.

"I was nineteen. I beheld my end approach with deep dismay. One day, when I was bewailing myself, a very sensible friend of mine paid me a visit. In the midst of his condolence he said, since all the physicians abandon you, let me bring you a man who is treated here as a charlatan because he is not known, but who in my opinion is a man of merit. He brought him. I spit blood in clots. I was in such violent pain, and my fever was so high, that I cried out, 'Ah, if there be yet time, save me!' He promised to do all in his power; but I heard him say, in a low voice, that it was very late. He made me promise to follow his orders exactly, how painful soever they might be; and I kept my word. Finding that a remedy he prescribed had not the desired effect, he gave orders for a cow-house to be prepared for me, which was finished in a day, in a coach-house belonging to my house. They broke open a window, and contrived stalls for three cows; a wooden railing, high enough for me to lean upon, was all that separated me from the animals. My bed was placed upon planks about a foot from the ground, the better to let the filth run under; and the planks were purposely ill-joined, that the vapor might rise through them; and this was so strong, that every thing white which was brought in became reddish in a short time.

"My apartment was divided into two rooms. That which I lived in was pretty large, and held a bed with curtains, surrounded by a gauze blind to keep away the flies, which always abound in stables, and are particularly insupportable during illness, a wooden table, two straw chairs without cushions, and bare walls—such was my chamber. There was a sort of anti-chamber for the woman who took care of the cows. My surgeon and waiting maid lodged over head. I had bells to call them at pleasure.

"I soon spit less blood. After being a week in the cow-house, my legs ceased swelling. Other symptoms improved. The night sweats I almost always had continued long after, but finally left me. From the moment I entered it, I renounced every species of food except milk: I did not taste bread even for nine months. People came to see me as an object of curiosity. The Duchess of Orleans paid me a visit; and, after my recovery, she recommended Doctor Saiffert to the Duke, which was the means of making his fortune. Here I remained nine months without intermission, with the exception of a few rides in a close carriage. In short, he saved me at the expense of my hair only, which all fell off. It was necessary to repair my fore teeth, which I had neglected in my illness; and I was absolutely forbid to play on the harp, which had made my breath very short; but what is all this in comparison with life? I am now become quite a strong woman; and although not so vigorous now at thirty-six as when I was nineteen, for all that I think I shall weather life out very well."

"In daring to commit such cases to the public," says the benevolent and enthusiastic Beddoes, "I feel that I am preparing a feast for those who resort to ridicule, if not as a test of truth, yet as the supreme delight of rational and immortal minds; but I hope also to interest those whom no ludicrous accessories can prevent from viewing with complacency the first awkward and unsteady advances towards an useful object."

A daughter of the celebrated Priestly having applied for advice: In her case, to have placed the smallest reliance on medicine," says the doctor, "would have been to encourage a fatal delusion; and there only remained the choice between a sea-voyage and a constant residence with cows. She asked me which alternative I should prefer in her situation. I told her undoubtedly with cows." And she made the experiment under his direction.

The stable provided for this lady was twenty-four feet long, fourteen feet wide, and nine feet high. A space partitioned off, was sufficient to contain a bed, a table, and allow a little room to move about in. Its floor, formed of rough boards, was raised a few inches above the ground of the stable. The windows were ill-placed; they faced the north, on account of the convenience of communicating with the house. They should have faced the south.

Two cows were placed in it for a month, and three cows for the remaining five months. There was a small stove in the part where Mrs. Finch lay, which was used for two months, for nearly half the day, but afterwards only in extreme frost, or on the room feeling damp.

The temperature for two months was kept from 60° to 65°, afterwards from 65° to 70°, but in general at 68°. The temperature was found best between the two latter temperatures, and the air at a medium between excessive damp and too dry heat of a stove. The stove lighted in the morning to dry a little of the moisture collected during the night was pleasantest to her feelings. Successive generations of flies were found to be a great nuisance, and the cordage and other parts of the bed were speedily rotted. The vapors however gave nobody cold, nor did any attendant suffer from a longer or shorter continuance in a medium so much warmer than the external atmosphere. On the contrary, one lady who paid many and long visits, had her symptoms of chronic rheumatism much alleviated.

The management of the cows was found to be a matter of some importance. For a month or six weeks they were allowed very little straw, nor was their standing cleaned; afterwards they had plenty of straw, and their beds were kept tolerably dry. Hay of the best quality and free from dust, was found preferable on all accounts, and straw that was clean and dry. The cows were watered twice a day, but not so sparingly as they might have been. The better the hay they were supplied with, the less water was necessary. Their horns were noisy, particularly during the night; on that account young cows without horns would have been more desirable, and such as were young in calf; and halters better than chains to tie them with.

Mr. Finch observed, that if the patient could have been on a low floor above the cows, many disagreeable circumstances would have been avoided.

The effect of their wet was all along nauseous to a stranger, but the feelings of the patient should alone be consulted. The genial warmth relieved oppression on the chest, took off restlessness, and produced a feeling the lady described by comparing it to nourishment conveyed through the pores of the skin; and so different were her feelings in the cow-house to what they were before, that she would have been reluctant to have changed her apartment for the night, however she might have wished a cleaner and more cheerful one for the day. After the first night, the air was to use her own expression, *balsamic*.

In this she remained through autumn and winter, for six months, with three exceptions. About a week after her entrance, she slept a night out of the cow-house, when the hectic symptoms and night sweats which had left her returned. Six weeks afterwards, she lived for three days in an apartment 3° warmer than the cow-house. The night-sweats did not return until the third night, and her breathing became laborious; instantaneous relief took place on returning to the cow-house. On a subsequent removal for a week no relapse occurred.

The effect on the cows living in a climate at this temperature was not observed by the doctor, but it is pleasing to reflect that while alleviating human suffering, the second mothers of mankind were benefitted themselves. "A cow," says Anderson, to enjoy existence, requires a temperature not lower than 50°, nor higher than 70°." But he sets one limit too low: a cow does not appear to feel pleasure in a climate under 60°; and we have seen them in a northeasterly wind prefer a moist warm cow-house at 75° to one 10° lower.

During the following winter, Mrs. Finch confined herself to an apartment heated artificially by a stove; but she then said, "I still prefer the air of the cow-house to my warm room, although it is of a good size, and lies to the sun." [Vol. II., p. 291.]

A detailed account is given of all the most remarkable modes of heating apartments by stoves, open fire-places and grates, of the last century or two, including Dr. Franklin's "Pennsylvania stove," and the celebrated Count Rumford's various improvements in burning fuel. The neatly executed diagrams which accompany the text, give one, in a small space and at a glance, a very excellent idea of the construction of the different apparatus. The chapters on heating by steam and hot water, are very interesting, both in a historical and

practical light. In the clever portions of the work devoted to ventilation, all the most celebrated plans, which have been used or proposed for the House of Commons, and other public buildings in England, are given in a very clear and perspicuous manner.

The copy before us is a London edition, published at a very moderate price, and for sale by MESSRS. WILEY & PUTNAM, New-

York. Unless some American work on the same subject is in preparation, we should be glad to see Mr. BERNAN's two volumes republished here. The dissemination of the excellent stock of information which they contain, could not fail to be productive of most beneficial results on the quick perceptive faculties of our numerous builders of houses.

FOREIGN NOTICES.

NEW BELGIAN PEARS.

LOUISE D'ORLEANS.—This pear having been judged the best which has ever issued from the celebrated nursery of the late Dr. Van Mons, his two sons, Colonel Van Mons, and his brother the counsellor, have been honored with permission to dedicate it to Her Majesty, the Queen of the Belgians. The seed which produced the tree was sown in 1827, in the nursery of the late Dr. Van Mons, at Lourain, and showed its first specimens of fruit in 1843. In form and size this pear resembles the variety called "*Bonne de Zéès*;" it is of medium size, oblong, about three inches in height, stalk quite stout, about an inch long, planted in a slight cavity; calyx small, in a basin of scarcely any depression; its divisions are short, narrow, and slightly projecting; the skin is of a fine bronzed green; the flesh is very white, fine grained, and very melting; its juice exceedingly rich, (*sucré superfine*.) It must be ranked among the noblest of its kind. It ripens at the end of October, and in the beginning of November.

NOUVEAU POITEAU. Bouvier.—The sons of Van Mons, says M. Bouvier, have favored my proposal to dedicate this pear to the intimate friend of their father, M. POITEAU, editor of the Annals of the Royal Society of Horticulture, of Paris. It originated likewise in the nursery of the late Dr. Van Mons. The tree which produced it was sown in 1827, and bore first in 1843. The fruit is nearly pyriform, about four inches high, by two and three-fourths in diameter. The stalk is striped crosswise, of a light orange color, three fourths of an inch, or more, long; the fruit gradually tapers into it; calyx set without depression, and having reflexed segments; skin, at the time of ripening, greenish, marbled and speckled with red; flesh very buttery, melting and sugary; the aroma of its juice resembles that of the "*Beurré Doré*." Time of ripening, the beginning of November. The combination of qualities in this pear, make it desirable to all amateurs. M. Jamin, nurseryman, Rue de Buffon, Paris, has obtained grafts of it, and will soon be able to furnish trees to amateurs.—*Journal d'Horticulture de Belgique*.

WEeping GLEDITSCHIA.—M. Bujot, nurseryman at Château Thierry, has discovered a phenomenon so important that we hasten to make it known to horticulturists,—a *weeping Gleditschia*, of great beauty. The branches, engrafted on the *G. triacanthos*, at the height of six to nine feet, almost hide the graft, so much do they droop downwards. The leaves are so delicate in form that one would call it an *Acacia* from New Holland. M. Paillet, who is every way competent to solve questions of this nature, assured me that this tree preserves its leaves till very late in autumn. It is truly a fine acquisition for picturesque gardens. It is sold under the name of *G. bujotie*. It can be procured at all seasons, for I have seen it in pots at M. Paillet's.—*M. Vilmorin, in Revue Horticole*.

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PRESERVATION OF TOMATOES.—The powder of tomatoes, presented at the exhibition of the Royal Society of Horticulture, of Paris, in July last, reminded us of a mode of preservation pointed out last year, by M. Vilmorin. We think we ought to report it here. "M. Jullien, President of the Society of Agriculture of Joigny, has pointed out to us a mode of preserving tomatoes for several months. It consists in gathering at a late period, the fruit which has reached its full size, but which is yet green. Leave eight or ten inches of the stalk, and tie them in bunches of six or eight, taking away most of the leaves. These bunches are afterwards hung in an airy and dark place, where they will keep all winter. When it is required to use them, take the necessary number of bunches and place them near the windows of a living room. The fruit reddens and ripens in a few days. This method suggested to us another, which will preserve them a shorter time, but which may also have its use. Green tomatoes, gathered the last of October, and set upon the latticed shelves of a well lighted fruit room, ripen there in succession; and at the moment when we write, such tomatoes have supplied our consumption for nearly six weeks. They are deprived of their leaves, like the others, and eight or ten inches of stalk left upon them.—*L. Vilmorin, in Revue Horticole*.

METHOD OF REMOVING ANTS.—Ants in gardens are, as is well known, very injurious, when they settle themselves at the foot of vegetables. Several methods are used to destroy or remove them. It happened this year that while trimming the branches of tomatoes, I threw a handful upon a little anthill; at the end of a few days I observed that the ants had disappeared. I did this early in July; I have repeated it since, and have obtained the same results. I wish that this simple means may be tried by many persons. There are few gardens in which the tomato is not cultivated, and the effect produced is easily explained. Its leaves and stalks have a strong and nauseous odor, which is by no means agreeable to the ants, and drives them away. For myself, I propose to try it again next year, and have reason to think that the results will be the same.

M. Philippe, gardener at Meyeux, near Naugis, writes us that he has succeeded in ridding himself of the ants which infested his gardens by watering the anthills several times in two days with water in which he had dissolved sulphate of potassium, in the proportion of fifty grammes to twenty-five litres of water. The sulphate of potassium used in this proportion exerts no injurious action on plants. On the contrary it renders them greener and more vigorous. Its price is very small.—*Pepin in Revue Horticole.*

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PROPAGATION OF GOOSEBERRIES BY CUTTINGS.—The Belgian Journal of Horticulture points out as infallible, a method of propagating gooseberries, by cuttings in August. It consists of cutting, in that month, branches of the same years growth, well ripened, and about a foot in length, and simply planting them in the soil in a shaded spot. They succeed better and more surely than those made in spring. I also have tried this method and have observed that this period is really better suited than any other to the propagation of gooseberries by cuttings, and probably for that of a great number of trees and shrubs. The operation is most commonly performed in spring. A great number of trials do not answer the expectation of the cultivator, for in that season the heat and dryness often prevent success. Many roses, and above all, Bengal roses, are subject to the same conditions, and succeed much better from cuttings in August than in spring. There are, regarding this process of propagating by cuttings in the open soil, many useful observations to be made, which would be applicable to a large number of plants.—*Pepin; in Revue Horticole.*

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NEW GARDEN PLANTS.—*Azalea Squamata.* Scaly-stalked Azalea. *Green-house Shrub.* From the mountains of Hong Kong, China, whence it was sent by Mr. Fortune, as a fine and distinct species.

With the habit common to all the Chinese Azaleas, they present the following peculiarities:—In its natural state it blooms without leaves, producing at the end of every little shoot a large solitary flower of a clear rose color, distinctly spotted with crimson on one side, and guarded at the base by a large sheath of bright brown scales (whence its name.) Its calyx, unlike that of the neighboring

species, is reduced to a mere five-toothed rim. Its ovary, immediately after the fall of the corolla, projects in the form of an oblong body quite covered with coarse brown hairs. The leaves when young are somewhat like those of *A. indica*, and have nothing distinctive in their shape or surface; but when old they are oval, sharp at each end, perfectly hairless, and as even on the upper surface as those of *Rhododendron punctatum*. This plant has been long known from dried specimens and drawings sent from China by Mr. Reeves, the latter of which are preserved in the library of the Society: but it has never before been introduced alive. At present its flowers have only been produced by plants out of health, and therefore they have given no just idea of the beauty of the plant, which is one of the finest in cultivation. It will probably prove hardy. In a case, containing several plants, Mr. Fortune sent home a portion of the soil, brown loam, in which this species was found wild, and for the purpose of trying its effects one plant was potted in it; but it has by no means the healthy appearance of those potted in rough sandy peat. It strikes freely from cuttings of young wood under ordinary treatment. The beautiful spotted flowers (although not large) and the neat foliage, together with a dwarf habit, will render this a plant of considerable importance either in a greenhouse or in the shrubbery.—*Jour. of the Hort. Soc.*

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DRAINAGE OF POTS.—Almost every body who writes on growing plants in pots recommends good drainage; but how this is to be effected, and of what sized materials the drainage is to be composed, is seldom mentioned. Now, as the health of the plant in a great measure depends on the free circulation of water through the soil, it is essential that the strictest attention be observed in the formation of drainage. The materials for this purpose should be perfectly dry and free from dust, whether these be corks, charcoal, or sandstone; they should be broken into different sizes, each size being placed separately by itself; thus if I were using three inch pots, I should first clean the pot well inside if required, then place a piece of cork at the bottom, nearly as large as will cover it, but concave, so as to allow the water free egress; on this I would place a layer of broken corks, or other material, about the size of Beans, and on this again a slight layer about the size of Peas. And when I used pots of a larger size, I would use larger pieces, always keeping the coarsest at the bottom and the smallest at the top, and, with very few exceptions, the plants will be benefited by placing a thin layer of turfy loam or peat over the drainage, as this keeps the smaller particles of earth from being carried down among the drainage. Although there is no fear of the drainage being impaired, if properly constructed, yet, to make doubly sure, let each pot be crocked as regularly as possible, one having no more drainage than another, so that in the next shift each may get the same proportion of soil as well as drainage. Pieces of sandstone mixed with the soil are very useful in drainage for hard-wooded plants, as are also pieces of charcoal and bone-dust for soft-wooded ones; in either case the roots will

be found closely adhering to these lumps. There are many gardeners who say, "I have no time to attend to such a routine of breaking and layering;" but crocks do not spoil by being broken and sorted in the coldest day in winter, nor yet if done in wet weather, when nothing can be done out of doors. The different sizes may be placed in large pots, and put somewhere out of the way, where they will be dry until the crocks are wanted for use, which is generally in spring and summer seasons, when work is pressing; thus time is saved by having crocks previously prepared, and plants are benefited by judiciously arranged drainage, which is sure to be effectual.—*W. Moody in Gard. Chron.*

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GREEN FLY.—To destroy this pest, pour a quart of boiling water on an ounce of Tobacco, let it stand till cold, then strain; dip the heads of your standard Roses branch by branch into a large basin filled with this infusion, shaking them gently in it; the greater part of the insects will fall into the basin, and the rest will surely die. Another plan, and even a more effectual one, is to dip the plants, as before, into a basin of strong soap-suds. Whichever solution be used, the dipping must be performed where possible: but it will not be possible if the Roses be trained on a wall; in that case syringing with one or other of these infusions must be had recourse to: it will succeed only in those parts of the plant where the liquid falls; of course many leaves will remain untouched. I may add that the syringing with soap-suds is excellent for Geraniums and Cinerarias when infested with insects.—*M. Clark in Gard. Chron.*

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SINGULAR NEW CABBAGE.—In a late number of *Chamber's Edinburgh Journal*, is a detailed and very interesting account of a remarkable new species of esculent vegetable found growing most abundantly on an Island in the centre of the Southern Ocean, known as the Island of Desolation or Kerguelan's Land: farther distant from a continent than any other Island known. It belongs to the same natural family as the Cabbage, Turnip, &c., though quite distinct in its habits of growth. It is the *Pringlea antiscorbutica* of botanists. It grows in the greatest abundance over the whole of the Island from the sea-shore, where it is large and succulent, to the sides of the hills 1400 feet high.

"During the whole stay of the ships *Erebus* and *Terror* in Christmas Harbor," says Dr. Hooker in his *Flora Antarctica*, "daily use was made of this vegetable, either cooked by itself, or boiled with the ship's beef, pork, or pea soup. Its essential oil gives a peculiar flavor, which the majority of the officers and crew did not dislike, and rendered the herb even more wholesome than the common cabbage, for it never caused heart-burn, or any of the unpleasant symptoms which that plant sometimes produces. Invaluable as it is in its native place, it is very doubtful whether this plant will prove equally so in other situations. It is of such slow growth that it is doubtful if it could be cultivated to advantage. Growing spontaneously and in so great abundance where it does, it is likely to prove

for ages to come an inestimable blessing to ships touching at this far distant Isle: whilst its luxuriance amid surrounding desolation, its singular form and appearance, striking even the casual observer, and the feelings of loneliness and utter isolation from the rest of the world, that must more or less oppress every voyager at first landing in its dreary and inhospitable locality, are circumstances likely enough to render the Kerguelan's Land Cabbage—Cabbage though it be—a cherished object in the recollection of the mariner: one never to be effaced by the brighter or more luscious products of tropical vegetation.

"The contemplation of a vegetable very unlike any other in botanical affinity and in general appearance, so eminently fitted for the food of man, and yet inhabiting the most desolate and inhospitable spot on the surface of the globe, must equally fill the mind of the scientific inquirer and the common observer with wonder."

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[By the Great Western, we have our files of Horticultural journals. The following leader, from the *London Gardeners' Chronicle*, of July 11, will show such of our readers as know Professor LINDLEY in his graver scientific labors, the mixture of comedy, classicality, and reality, with which he often relaxes his mind, in conducting that journal.]

What is a PARAPETTICOAT? We are astonished at the numerous inquiries that have reached us about this article. Its name reveals its nature. It is a hybrid between a parasol and a petticoat. This is not banter but fact. And why should there not be such a thing? What is there in *rerum natura* to prevent an ingenious person from applying those two needful articles of shelter and dress to gardening purposes? They will fade, and wear thin, in the custody of the most economical gentlewoman, and to find a use for them afterwards is an adaptation of means to end which cannot be too highly commended.

Let us give a receipt for making a Parapetticoat. First find a good sized parasol, or small umbrella, covered with cotton, and not rubbed into holes. Then select a cast-off petticoat, not a crinoline, which Mrs. MALAPROP calls a Kremlin, nor yet a flannel, but some other form of the vestment; it need not be very full; indeed, it will be better for being scanty; sow up the opening, and it is ready for attachment to the parasol. For this purpose the latter instrument must be opened, and kept so; then the upper end of the petticoat is to be sowed to the edge of the parasol, and a staff six feet or more long is to be secured to its handle. Thus the parapetticoat is constructed.

But what a word! cries Sir ERASMUS VERBAL. What a barbarous compound of Greek and Saxon! The thing may be well enough, but its name is unendurable. Pray call it a parachiton, or a parachitonisk. We can have no objection to the change, if the world prefers it; and we agree with Sir ERASMUS, that it will be as well to adopt it when parasol is called parahelion, and parapluie a paraombriion—but not till then.

And what is the parapetticoat for? For, Madam! for a most important purpose. It is an

Instrument of execution; it is the shirt of Nessus; it is the robe of Atropos. It is to enable the gardener to dispatch his mortal enemies. It is to relieve his rose bushes from that foe which he assails in vain with snuff, gas water and smelling salts. It is to kill green-fly, (*Aphis*.)

The instrument is used thus. In the first place the petticoat is drawn up till it rests upon the outside of the parasol. The staff of the latter is then introduced perpendicularly into the centre of a rose bush, and secured in its place by being pushed into the ground. The petticoat being then drawn down, the bush is completely covered in by the garment.

— riget horrida tergo
Palla —.

The gardener then blows his tobacco smoke beneath it: in a few minutes the rose bush is enveloped in a cloud which has no outlet; the green fly seeks in vain to escape from the fatal atmosphere which enters every fold and lurking-place; he clings in vain to his beloved rose-buds; his grasp relaxes; he falls; he dies; and with him

Unnumbered corpses strew the fatal plain.

Five minutes suffice for the execution. The veil may then be raised, the instrument removed, and the operation repeated upon a new horde of delinquents.

Beware, however, of leaving the poison which killed *Aphis*, upon the leaves of the rose tree. Let them be immediately syringed abundantly with lukewarm water, so as to remove the odor, or it may be found that in destroying our enemies we have also ruined our friends.

M. André Leroy of Angers, France, has succeeded in grafting that superb plant, *Clianthus puniceus* upon *Colutea arborescens*, the common Bladder Senna.

Beautiful effects also were produced by him by grafting the Lilac on the common Ash (*Fraxinus*) standard high. The Lilac forms a handsome bushy head, and flowers finely.—*Revue Horticole*.

EFFECT OF SULPHATE OF IRON ON VEGETATION.—The Journal d'Horticulture Pratique asserts that a tree of which the wood is tender, poor, and sickly, to which a strong solution of sulphate of iron should be applied, revives and puts forth an extraordinary vegetation. This dissolution of sulphate, of which M. Paquet has made many successful applications this summer, should be given in and with the water, when the plants or trees are watered, so that the roots may more readily absorb the chemical agencies which reanimate the vital forces of the tree.

RHODODENDRON ARBOREUM.—There is no flower in the conservatory during the dull months of January and February, that can in any way vie, in elegance of habit, or brilliancy of color, with the Rhododendron arboreum, and yet in how few instances do we meet with it in perfection; in how many do we find complaints made of the difficulty there is in inducing it to bloom at all; in fact, I have known many persons to have this plant in their care for years, and never to succeed with it; so that eventually one of the richest ornaments of our conservatories is discarded as

worthless. I have a very handsome bush about six feet in height in the conservatory here, which during the months of January and February last was truly splendid; it had forty-six fine large heads of bloom fully expanded at one time, besides many more, both before and after, all of the richest bright crimson. This plant is now again set for bloom, and I expect will have about sixty-five or seventy heads; a smaller plant about three feet in height is also beautifully set with blossom buds, and will flower any time during the next winter, according to its treatment. My attention was first drawn to this plant by seeing the very large specimens at Mr. Knight's in the King's-road, and I thought if smaller plants of the species could be made to flower as well, how very desirable they would be. I have been generally successful in my treatment, which mainly consists in a careful attention to the supply of water. During January, and the four succeeding months, they require a very plentiful supply; the four following, viz., June, July, August, and September, only half the quantity; and during October, November, and December, I give scarcely any, gradually drying the ball completely, even to punishing the plant. Perhaps these hints may have some effect in making the *R. arboreum* more universally cultivated and better bloomed.—*J. L. Snow, in Gard. Chron.*

TRICHOSANTHES COLUBRINA. The Serpent Cucumber, or Hairblossom. *Stove Perennial*. Spanish Main.—We believe that the sole possessor of this curious plant is Sir John Hay Williams, Bart., of Bodelwyddan, near St. Asaph. The seeds had been received from Puerto Caballo, and under the care of Mr. Sparrow, the gardener at Bodelwyddan, soon produced young plants. In growth, the species resembles a Cucumber, with leaves ten or twelve inches across, and varying in form from heart-shaped to three or five lobed. The flowers are white, and beautifully cut into delicate threads, whence the botanical name *Trichosanthos*, which Sir James Smith translated Hairblossom. The fruits, which hang down from the rafter to which the vines of the plant are trained, resemble serpents, are six feet long, and when unripe, are singularly striped with green and white, which changes to brilliant orange. We already possess in our gardens an allied species from the East Indies, called the Snake Cucumber, which differs in having smaller flowers, hispid coarsely toothed leaves and fruit, which is scarcely half the length of this, and is, therefore, much less remarkable in appearance. From Mr. Sparrow we have received the following account of his mode of cultivating this plant: "I sowed the seeds last June in a small pot, and placed them in the Pinestove, where they vegetated in about a week; and after the plant had attained the height of eighteen inches, I planted one in the pit of the plant-stove, in a compost consisting of two-thirds bog and loam in equal portions, to one-third leaf-mould and sand, where it grew finely, and ripened the first fruit about the middle of November. I may mention, that the pit in which I planted it is heated underneath with hot water pipes."—*Botanical Register*.

DOMESTIC NOTICES.

A NOTE ON PEARS.—The White Doyenne Pear, which some have said was an outcast, flourishes on my father's estate, as with you, in all its original vigour. The trees were procured by him in 1802 from Prince, under the name of *Firgalien*, as I find by his record.

When in London, Paris and Belgium, in the winter of '44-'45, I had repeated opportunities of testing the new varieties of pears. I found the following to be the finest: Beurré d'Arenberg, Winter Nelis, Passe Colmar, Glout Moreau, Easter Beurré, (the latter ripe in London 8th of Dec.,) Beurre Diet, D'Angoulême, Ne plus Meuris, and Marie Louise. This last is considered the finest November pear in England. The season of 1844 was peculiar in England, all the winter pears ripening much earlier than usual. In Paris I found the old St. Germain very fine. On the 4th of October, 1844, dining at Rouen, I found at the depot the handsomest and prettiest specimens of the White Doyenne I ever saw, looking and tasting as though they had been grown on trees as healthy and vigorous as the Seckel. Yours, very respectfully, Wm. C. W. Baltimore, Md., July 31st.

[The above is an extract of a letter from a zealous amateur in Baltimore. Will our friends, who still believe in the doctrine of "outcasts," have the goodness to observe the fine quality of that very old, unsurpassed, and much abused pear, the WHITE DOYENNE, in France. It is certainly not yet quite abandoned in that country.—ED.]

BIGNONIA GRANDIFLORA.—I have a remarkable specimen of the large flowering Trumpet Creeper, (*Bignonia grandiflora*.) It is grafted on the native sort—(common Trumpet Creeper, *B. radicans*)—the only mode in which I could ever succeed in growing it. It covers a three sided trellis, 15 feet in height. I had the curiosity, a few days ago, to count its flowers and buds. It contained 54 coryms, each of which averaged 10 flowers and 27 buds—in all upwards of 500 flowers and 1500 buds to expand. I saw no climbing plant in any part of Europe to surpass this, or scarcely to compare with it. Plants grafted this spring are now 6 feet high and in bloom.—W. C. W. Baltimore, July 31st.

[There are two large plants of this fine creeper in our neighborhood, which are growing on their own roots, and are pictures of beauty every season—though neither of them will compare with that of our correspondent in the profusion of their flowers. *B. grandiflora* requires a slight covering here with straw in winter to insure it against the effects of any unusual cold. This variety is much more striking and beautiful in its blossoms than the old Trumpet Creeper. The flowers are large and not trumpet but cup-shaped. The color is orange on the inside and darker red on the exterior of the blossom.—ED.]

THE NORTHERN SPY APPLE.—It will be remembered that our correspondent, Mr. W. R. SMITH, of Macedon, N. Y., in an article on this already cele-

brated fruit, in a previous number, stated that "however valuable for the garden or small orchard, it is worthless as a market fruit compared with the Baldwin, Newtown Pippin, or Roxbury Russet."

The editor of the *Genesee Farmer* dissents from this opinion, though at the same time he says that he admits "the fruit does deteriorate sooner on old trees of diminished vigour than many other varieties, such as Rhode Island Greenings, Russets, &c.—but by no means so as to render it 'worthless as a market fruit.' It only renders more careful culture necessary." He adds, "one fact which we are bound to consider conclusive in regard to the merits of this fruit, is that all the superb specimens that have appeared in our markets during the last few years, and have attracted such universal admiration, have been produced in common country orchards, under very ordinary culture—such as our good eastern fruit-growers, like Mr. PELL, would consider absolute neglect. In such men's hands as Mr. PELL the 'Spy' would surpass any thing Mr. S. or any of us have yet seen."

We have copied these remarks in order to say that in so far as regards cultivation, and the effects produced by it on the size and fairness of the apple, we are inclined to differ from the editor of the *Genesee Farmer* in the present instance. We were in the neighborhood of Rochester during the early part of this month, and nothing, in a gardening sense, struck us so forcibly as the unusual health and luxuriance of all the apple orchards that we saw about that city. Certainly Mr. PELL's orchards, which we have also had great gratification in examining this season, by no means present a more beautiful spectacle than many common country orchards that we saw in the neighborhood of Rochester. The trees were loaded with fair and beautiful looking crops of fruit. No soil can, as it appears to us, be naturally more favorable to the luxuriance and large product of the apple, than that of the neighborhood of Rochester. Its newness and great fertility are an abundant offset to the system of manuring adopted so judiciously and with such excellent results by Mr. Pell. And we greatly doubt if the high culture of any of our eastern growers of fruit would succeed in producing for a long time large crops of fair Northern Spy apples, if this variety has the defect in question, in a soil where it originated, and where it is eminently vigorous in its growth.

Since the publication of Mr. Smith's remarks, we have heard from several growers an expression of a similar opinion. Mr. J. J. THOMAS, of the same neighborhood, expresses the same opinion in his "Fruit Culturist." We are therefore inclined to believe that the Northern Spy is more valuable for the garden or small orchard than for market cultivation on a large scale. But we shall be glad to hear more evidence on the subject, from any orchard grower of this variety.

THE RED JUNEATING APPLE.—What is the true Red Juneating Apple? The fruit that is known in

this neighborhood appears to me to agree perfectly with the cut and description of the "Early Strawberry" Apple of your *Fruits and Fruit-trees of America*.—C. Burlington, N. J.

ANSWER.—The Red Juneating is not now considered a standard name, the European apple to which that name properly belongs being now called the *Early Red Margaret*. (See *Catalogue of London Hort. Soc.—Lindley's Guide to the Orchard—and our Fruits and Fruit-trees*.)

The apple known in most American collections as the Red Juneating is a totally distinct fruit—the *Early Strawberry Apple*. It is an American fruit, ripening about the same time as the *Early Red Margaret*, (Red Juneating,) but very distinct from it, so that no person who once compares the two fruits, can ever confound them.

The *Early Strawberry* has a long stalk, and is a high colored fruit, striped with dark red. The *Early Red Margaret* has a short stalk and is a dull colored fruit, with faint red stripes. We have had both fruits in bearing this year, and have compared them for several years past. The *Early Red Margaret* is correctly shown in the beautiful colored plates of Ronald's *Pyrus Malus Brentfordensis*, and in the *Pomological Magazine*. Our *Early Strawberry Apple* is not described in any European work that we have seen. It is greatly superior to the *Early Red Margaret* in productiveness, and especially in *long keeping and ripening gradually*, qualities that are rare in early apples and for which the market dealers in New-York rate the *Strawberry Apple* very highly.—ED.]

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THE HISTORY OF THE NOISSETTE ROSE.—The note regarding the origin of this rose quoted in our first number from the *Annals of Horticulture*, has attracted the attention of some friends at the south, acquainted with the facts regarding its production. We have before us a note from JOHN D. LEGARE, Esq., of Charleston, S. C., with some interesting details regarding this plant, which certainly clear up all doubts regarding its origin.

Mr. LEGARE informs us that the account given in the English journal of its having been originated on Long Island, and carried thence to Rouen, is entirely a fabrication. Its true history he says is that it was raised from seed by Mr. PHILIP NOISSETTE, of Charleston. Mr. L. informs us that he was for many years acquainted with Mr. NOISSETTE, who owned a small farm on Charleston neck. From his own lips Mr. LEGARE heard the account of the origin of this rose more than once, and if he is not greatly mistaken he showed him the parent plant. Mr. NOISSETTE frequently spoke of the attempts of the nurserymen in Europe to rob him of the honor of originating the first of this beautiful class of Roses—which he attributed to the then low opinion entertained by them of this country; as at that time its origin was attributed to his brother, the nurseryman at Paris—this last English story had not been dreamed of. Mr. NOISSETTE mentioned to Mr. LEGARE the sorts of roses between which the original Noisette rose was a hybrid—but the latter does not recollect which were the varieties. "Certain it is, however," says Mr. LEGARE, "no one in the neighborhood of Charleston but

knows as to its originating here and by the hands of Mr. Philip Noisette."

EFFECT OF SALT UPON DEPTH OF VERDURE.—Every one who knows the English Hawthorn, knows how much it suffers in this latitude with the heat of our midsummer sun. Beautiful as it is in early spring, it usually becomes, after the month of July, so brown and dingy in its foliage, as frequently to present the appearance of a *dead* rather than a *live* fence.

Having a fine line of this hedge on one of the boundaries of our premises, and observing that the borer was commencing his attacks upon portions of it, we applied in April, 1845, a pretty plentiful dressing of salt along the whole line of hedge, and immediately, about the base of the thorn stems. The application was strong enough to kill the young tufts of grass, that were growing here and there among the roots of the hedge. The hedge itself was greatly improved in luxuriance by it. But what most surprised us was this: the spring and summer of 1845 were perhaps the driest and hottest ever known here. Trees and plants of every kind suffered greatly. For the first time, within our remembrance, since the hedge was planted, it maintained its healthy and green verdure, *through the whole season* till autumn. We attribute this solely to the action of the salt, and cannot but think, therefore, that it must be one of the most valuable alternatives, when the soil is naturally *too dry*, for any tree or plant, provided the tree or plant to be grown there is one that will bear salt.

A dry soil is one that from its texture has too little capacity for retaining moisture. Common salt has an unusual capacity for attracting it. This is probably one reason why the plum tree, which loves a moist soil, thrives so well after the application of salt.

BUDDING IN THE SPRING.—The French often inoculate or bud in the spring, but we believe the practice is mostly confined to the propagation of Roses. There is no reason, however, why it should not be applied to fruit trees, ornamental trees and shrubs.

We forwarded some grafts in April to our correspondent, N. Longworth, Esq., of Cincinnati, of a rare variety of Mulberry. The Mulberry is by no means an easy tree to propagate by grafting. Mr. Longworth writes us regarding this as follows:

"I received the Johnston Mulberry grafts you sent me, and also some from Professor Kirtland. Not one graft out of thirty lived.

"I retarded or kept back a single graft containing *four buds*, till the bark peeled. *All these buds* (which I inserted in the common way) *grew*. I was equally successful in budding, at the same time, Pears, Nectarines and Apricots on stocks that had had their buds killed by the winter. Why have not writers on horticulture dwelt upon this? I shall hereafter abandon the grafting of large trees, and bud in the spring. If the first bud fails, I can repeat it in June. Yours, with regard, N. Longworth. Cincinnati, O., June 18th.

.....
CLOTH OF GOLD ROSE.—This new Rose, which has been sold at so high a price, and upon which so many praises have been lavished, as the *ne plus*

ultima of its class of yellow everblooming Roses, will, I fear, prove a downright disappointment. I have had six plants in my possession for eighteen months, and have never seen but two flowers. In a word, it is a *shy bloomer*, and I am sure does not possess the qualities to make it a popular Rose. Does this correspond with your experience? J. B. S., Philadelphia, June 6th, 1846.

[We answer, *yes*: and hearing this same account from rose growers in various parts of the country, we have little doubt that the opinion of our correspondent is, for this climate, a sound one.—Ed.]

RED ASTRACHAN APPLE.—This is certainly a fruit of rare merit. In my judgment it has no superior at its season. It ripens in my garden about the same time as that general favorite, the Yellow Harvest. Perhaps it is not quite so high flavored, although I am sure it lacks but little. But what can approach it in beauty! I picked a basket of this fruit to-day (July 16th), every specimen of which is like a perfect wax fruit—brilliant purplish-red, with a bloom like a plum. This bloom, by the way, is a trait of Russian Apples. The tree bears only *too much*, and is as regular in its product as the return of the swallow. Yours. Long Island.

FAILURE OF THE CHERRY CROP IN THE VICINITY OF BOSTON.—There has been an unusual failure of the Cherry crop in this neighborhood the present season. The excessive hot weather in April caused the trees to show an early bloom, and the prospect for an abundant supply was very flattering for the first half of May. We then had very cold weather for the season, and a number of frosts occurred, in some places rather severe, but not sufficiently hard near Boston to affect the fruit unfavorably, although there were strong fears that this would be the case; but the very severe and cold northeast storm that prevailed a number of days the last of the month, had a more disastrous effect. It caused not only the Cherries, but Pears and other fruit to blast, and at least half the Cherries were ruined and dropped to the ground. It is said "half a loaf is better than none," and many were flattering themselves that although half their crop was ruined, the increased price of what remained would nearly or quite make up the deficiency in quantity, but here again they were to be disappointed. Just as the fruit began to swell and show colour, we had a continuation of wet and cloudy weather, which caused it to crack; a speedy decay followed, and hardly a Cherry remained upon many trees fit to eat. Indeed, from our own trees, which have invariably produced for the last ten years at least thirty bushels of Cherries every season, we did not gather more than two bushels: these were insipid and almost tasteless, and so destitute of their peculiar flavor, that the different varieties could not be recognized unless they were taken directly from the tree.

We believe the failure was general, for we have hardly seen a sound Cherry this year in the market. In consequence of this failure, our exhibitions of Cherries at the Horticultural Hall, the present season, has been much less interesting than for many years past. But notwithstanding all this, some cultivators have contrived to exhibit tolerably fine

specimens of this delicious fruit, especially of some of the late varieties. But what is considered fine this year would hardly be looked at in common years. Yours, J. B. Boston, July 10th, 1846.

DEFOOLIATION OF THE PLUM.—My soil is light and every season about midsummer most of the leaves of my plum trees drop off. The consequence is my plums ripen badly or do not ripen at all. My soil is a light and sandy loam.—Yours, Philadelphia, August 10.

[If our correspondent will give every bearing tree whose trunk is as thick as his arm, half a peck of coarse salt, strewed over the surface of the ground in April every season for three or four years, he will find the trees to carry their foliage well, and of a deep green color through the whole season, bearing also crops of fine fruit.

In a previous notice we have spoken of the remarkable effects produced on the verdure of a hawthorn hedge here last season by the application of salt. We ought to add that this spring we omitted its application, and the consequence is that now, the middle of August, the hedge is becoming quite brown and dingy, notwithstanding the absolute moisture of this summer compared with the great drouth of that of '45.—Ed.]

THE GLOUT MORCEAU PEAR.—We learn by a letter from OTIS JOHNSON, Esq., of Lynn, Mass., that the Glout Morceau Pear does not succeed at all in his garden at Lynn, and he adds that he is informed by a gentleman in Salem that the fruit also blights in that city. Mr. JOHNSON we know to be one of our most skillful cultivators of this fruit, and he adds that his trees of this sort are on "Quince stocks—of good size and all quite thrifty. The fruit sets very plentifully, but blights and falls at an early stage, and this is the only variety under my cultivation that blights."

In Boston, as we have ourselves seen, and as our readers know by Col. WILDER's article, this is one of the finest of fruits—and we may add that we have never seen a blighted pear of this variety anywhere in the interior. We fear, therefore, that, even on the Quince stock, the *Glout Morceau* may prove too delicate to be worthy of cultivation quite near the sea, as at Salem, or Lynn, though highly valuable elsewhere. It is only by a collection of such facts, furnished by cultivators of judgment and experience like Mr. JOHNSON, that Pomological knowledge can ever be rendered ample and satisfactory, in a country so various in its climate and soil as our own.

JENNEY'S AND MOTTIER'S STRAWBERRIES.—We observe, in the report of the committee upon fruits, of the Massachusetts Horticultural Society, made June 20th, it is stated that Jenney's and Mottier's Seedling Strawberries "*are very acid and not worthy of cultivation, and better adapted to a southern climate.*" On the 4th of July, the committee report of the Jenny's Seedling, that "*the berries were large, and notwithstanding the season has been unfavorable for the ripening of strawberries, still the flavor was extremely rich; we class it among the best.* In justice to Mr. Jenny and ourselves, we must add, that his former speci-

mens came to hand in poor order, they having been gathered when the fruit was wet." The specimens first exhibited were presented by Mr. J. L. L. F. Warren, the last by Mr. Jenney. We presume that the opinion first expressed, was somewhat too hastily formed, and that the variety in question was approved of upon trial; still that opinion was very stringent and decided, and we should hardly presume that the fruit being gathered when it was wet, would make the difference between "very acid" fruit, "not worthy of cultivation," and fruit "of flavor *extremely* rich," and "among the best." The Mottiers' and Willey's Seedling, which were presented at the same time and by the same person, and equally condemned, were probably gathered "when the fruit was wet," yet we find no change of opinion, on the part of the committee, as to their quality. Fruit may be "very acid," and still have a "rich flavor." We should be pleased to know what the true characters of these varieties are, especially Jenney's Seedling, whether they are too acid to become popular here, and "better adapted to a southern climate," or whether they are desirable varieties to raise for the market. In this question other cultivators besides ourselves are interested, and we would request an answer from the "committee," or other source. *L. C. E. Providence, R. I., Aug. 13.*

.....

THE BEST MODE OF GRAFTING.—Under the head of "Excellent mode of setting grafts," in your last number, "cloth brushed over on one side with grafting wax," is recommended. The easiest and most expeditious way of preparing the cloth is to dip it into the wax when hot, and "strip" the cloth between two sticks, so as to squeeze from it all the composition possible, and spread it out till it dries or becomes cool. The use of cloth prepared in this way is very common here, and is approved of wherever tried. The process is very speedy, more so than any other, full as successful and very neat. If the weather is cold when the composition is made, the use of lard instead of tallow renders the cloth more pliable.—*Id.*

.....

TURPENTINE INJURIOUS TO TREES.—The following item of experience may, perhaps, serve some of your readers. In the spring of '45, you will remember, our apple orchards were terribly infested with caterpillars; and seeing in one of the agricultural papers of the day, that turpentine would effectually destroy them, I poured some of the spirits on many of the nests, in some cases quite saturating them. The effect on the caterpillars was all that could be desired; but it killed, without exception, every branch upon which it was applied, scorching and shrinking up the bark, and causing it to cleave from the wood. And in the case of one young, thrifty tree, of eight inches in diameter, where the nest happened to be directly in the crotch, the whole tree was destroyed, the spirits having been applied copiously and run down some two or three feet on the trunk.

If this experiment shall save others from the use of turpentine for such a purpose, it will not

have been made in vain. *S. C. H. Hillsdale, on the Hudson, July 22d, 1846.*

.....

THE TRUE PEACH PLUM.—This plum, the fruit of which you so much admired, I have taken some pains to ascertain the history of. It was imported from France, in April, 1820, by the late James C. Duane, of this city, and has been cultivated by all the lovers of fine fruit in this vicinity, to the present time. The name was lost, but as one in the invoice was called Apricot Plum, the name was applied to this fruit. From a late examination of the fruit with your assistance, however, I am satisfied that it is the PRUNE PECHE, Peach Plum, of Noisette, and other French writers.

It is a rather tender variety, so far north as this, the young wood in the nursery being killed for several inches in severe winters. For the same cause it is a somewhat shy bearer, its fruit buds being injured in the winter, when those of the Egg, Washington, Green Gage, &c., escape injury. It is a strong upright grower, young wood smooth, purple, with medium length of joint, buds plump above the footstalk, below flat or slightly depressed; leaf large, ovate, slightly hairy on the under side; footstalk slightly hairy, with two large oval glands near the leaf. Fruit large, roundish, measuring six inches in circumference, rather larger on one side of the suture, which is distinct. Stem short, scarcely half an inch long, curved, and inserted in a round cavity; there is a slight depression in the eye. Color red, shining through a whitish bloom, with a few small yellow dots; looking like a handsome peach, rather than a plum. Flesh firm, yellowish green, and slightly sub-acid; parts freely from the stone, which is blunt at both ends, and deeply furrowed down the thickest edge. Its fine size, beautiful appearance, and early maturity, (ripening about the fifth of August,) render it a very desirable variety. This summer, it ripened ten days earlier than usual, the season being very forward. Trees of this variety can be obtained from the nurseries of James D. Velthouse, and Christopher Reagles, in this city.

This plum is entirely distinct from the plum in the nurseries on Long Island, and elsewhere, under the name of Duane's Purple French, which is a clingstone. Yours truly, *Charles H. Tomlinson. Schenectady, Aug. 6th, 1846.*

[Our readers will observe a figure of this very rare fruit, to which our attention was first drawn by Mr. Tomlinson, in another page of this number.—Ed.]

.....

COMMENTS ON THE HORTICULTURIST, No. 1.

HEDGES, p. 23.—The most beautiful hedge that I have seen, is of Hemlock (*Pinus canadensis*). When trained and clipped, it becomes a dense wall of verdure.

Page 34.—The kind of Laurel referred to, is *Kalmia latifolia*; but *Rhododendron maximum* is not better adapted to our common soil. Indeed a long list of ornamental plants might be made, including *Andromedas*, which perish from the same cause.

DOUBLE CONVULVULUS, p. 48.—I have had for many years a double *Convulvulus panduratus*. On

this species, Pursh made the following remark in his *Flora* (1814): "There is a variety with double flowers cultivated in the gardens of America, which is a singular circumstance in this genus. As an ornament for the border, however, I think it inferior to the common sort; for it is not so large, and the fine red so conspicuous in the eye of the latter, is scarcely discernible."

CHERRIES, p. 49.—People are organized so differently, and vary so much in their estimates of the same fruit, that "*no disputing of tastes*," passed into a proverb in the olden time, and ought never to be forgotten. Still they are fruits which pass for excellent, with scarcely a dissenting voice, as the Virgalieu Pear; but many would vote differently in regard to the Downton and Black Eagle Cherries, some preferring the sprightly juice of the former to the rich sweetness of the latter. I should be cautious, however, about recommending a fruit, though a favorite with me, if my neighbors considered it only second rate; but with the encomium on Downer's Late Red, I can fully accord. This has been the third season of its bearing in my garden; and it deservedly ranks with our finest cherries.

There is another late sort, of which I received grafts some years ago, under the name of Cream Cherry—said to be a seedling from Tompkins county—which we highly esteem. It is not large but sweet and delicious, and perhaps is later than any other in my collection. J. J. Thomas, after a careful examination, thinks it very nearly agrees with the Honey Cherry; but whether identical or not, it seems well adapted to this climate. I have not known it to rot, except in the present season, when all that were left of my other cherries, save the acid ones, decayed at the same time. In twenty years, I have not seen such destruction in this fruit.

THE VIRGILIA, p. 50.—I have a tree of the Virgilia about twenty feet high, which endures the winters of this northern land without injury, like other trees from the mountains of the Southern States; but it has never flowered but once. This defect may be constitutional, as it is probably a seedling; for we observe some seedlings of the common Locust much more productive of seed than others; and like seedling Lemon trees, it may require grafts from a better bearer. *David Thomas, of Cayuga county.*

DRYING PLANTS.—In the first number of "The Horticulturist," I notice an extract from the Gardener's Chronicle, giving directions for drying plants for a herbarium. Changing the papers is recommended, as they become damp by contact with the drying plants. I have found it an equally good mode in every respect, and far less laborious, never to change the papers; but every day, or every two or three days, as circumstances require, to spread the papers, containing the plants *within* their folds, over the floor of the room, for a few hours. The papers thus become dried by exposure to the air; the plants retain their original shape, and are not twisted nor crumpled, as is too often the case when removed from the papers; while not half the time is required for the work. This course is absolutely necessary for some plants, which easily roll or become folded together while transferring them.

The excellence of this mode has been fully proved on thousands of specimens, which were usually regarded by the botanists who saw them, as remarkably well dried. *J. J. T. Macedon, N. Y.*

THE SYCAMORE OR BUTTWOOD.—This fine tree is now suffering in the Eastern states from a blight, such as it was subject to a few years since in Pennsylvania; and some persons in despair, are cutting them down. The "Horticulturist" may confer a favor, by informing its readers, that, after an attack quite as bad in our city, the trees entirely recovered, and are now as handsome and healthy as ever. The only treatment necessary is pruning off the dead wood, and severely heading back the sickly branches. *Philadelphia.*

MILDEW IN THE GRAPE.—A writer in the Farmer's Cabinet, with the signature of "Chemico," suggests that the *fungi* causing blight or mildew is caused by "a surplus of carbonic acid gas, which gas would not exist as such, were there a sufficient supply of potash in the soil." He adds: "In the appendix to Liebig's Agricultural Chemistry, second American edition, by J. W. Webster, you will find that while speaking of the mode of manuring grape vines, it is said, 'Under ordinary circumstances, a manure containing potash must be used, otherwise the fertility of the soil will decrease. This is done in all wine countries.' Again, 'one thousand parts of the pruned branches [of the vine] contain fifty-six to sixty parts of carbonate, or thirty-eight to forty parts of pure potash.'"

"We may now easily account for the facts mentioned by your correspondent, that 'old vines are much more liable to mildew than young.' They have exhausted the potash from the soil, and when their leaves absorb carbonic acid, the plant has no potash with which to form a healthy salt by union with it, and the diseased plant invites the fungi."

"A humid summer is favorable for the generation of carbonic acid, and hence the reason why 'T.' found his young vines attacked during such a season. 'T.' is correct when he says, 'the soap-suds is always beneficial, and can be used freely.' The reason is, soap-suds contain potash. I should recommend very strongly the use of wood ashes about grape vines; particularly in 'cold graperies' the vital power of the plant is not so strong, and consequently it has not the power to expel the cause of the disease."

[There is some point in these notions regarding mildew. Young and healthy plants are seldom attacked by mildew, while old and feeble ones are very liable to it. Our own observation has led us to believe that wood ashes is one of the most beneficial fertilizers for the grape vine, giving it the appearance of extraordinary luxuriance and health. The great productiveness and longevity of the vineyards abroad, which are formed upon a soil composed mainly of the spent ashes of volcanoes, and the acknowledged superiority of the grapes and wine yielded at least by such soils are manifest proofs of the value of ashes. In the mean time, wood ashes is of almost universal benefit to the growth of plants, and are easily obtained and applied, at least in moderate quantities. Let every one troubled with the mildew, especially in grapes

make a fair trial of it, and report for the benefit of others. There are certainly some soils where this plant thrives wonderfully well, and no mildew appears; and others where, with all ordinary care, it can seldom be prevented. If the application of potash in the form of wood ashes will ensure the cultivator against mildew in grapes alone, it is a discovery of no ordinary utility.—Ed.]

.....
WASH TO DESTROY INSECTS.—A solution of camphor in alcohol is the best wash to apply to many of the woody green-house plants, to rid them of the *black coccus* and scurf so often seen on old specimens of Gardenias, Oleander, Oranges, Camellias, &c. It may be used with a common tooth-brush or piece of sponge, taking care to avoid leaves not fully developed, and to dilute the mixture, if too strong, with water. One ounce of camphor is enough for two quarts of spirits. The camphor seems to have the power of reviving the drooping energies of plants, and has therefore been recommended to be added to the water in which *Bouquets* are placed. *J. W. Knevels. Fishkill Landing, N. Y., July 20th, 1846.*

.....
PHENOMENA OF THE SEASON.—Many trees have shown a remarkable disposition to produce twin fruits this season, whether in consequence of the extreme drought and heat of last summer or not, has not been determined, but we may attribute to those causes their unusual abundance the present year. The quantity of fruit is always referable to the agencies of a preceding, not of the present year. Among fruit trees in which this germination has been observed, is the plum, strawberry, &c. &c.

Upon the whole, the season may be set down as an early one, yet many articles are very late, among which, the common chesnut, which this day, July 20th, is still seen here and there in flower. *J. W. K. Ibid.*

.....
MANURE FOR THE CAMELLIA.—A suitable manure for Camellias may be found in horn shavings and other refuse of comb makers, steeping the shavings in water until it becomes offensive and pouring it off and applying it to the surface of the soil, but not over the foliage, as was recommended to be done with Guano, by one of the New York manufacturers of the article. Guano is also admirably adapted to the constitution of the Camellia, in a very weak solution, say half a pound

to 3 or 4 gallons of water, applied twice a week; it gives foliage of the intensest green and vigor. *J. W. K. Ibid.*

GOLD FISHES.—Persons who have the facilities afforded by running water, may possess the seabeautiful little pets, the most ornamental of all fishes, in great perfection. It is a fact, however, that in the breeding season, if the young have no place to retreat from the older males, they will inevitably be destroyed; for this purpose, I place in their ponds every spring a quantity of brush wood, covering it over occasionally with the leaves of the large "spatter-dock," and here they succeed admirably.

In England I observed that mill-ponds were a favorite place for gold and silver fish; probably they derive some nutriment from the flour ground in the mill, portions of which may escape to the pond by being blown about in the air. In some places they are regularly fed with meal.

The gold fish has increased in the dam of the Schuylkill river, just above Philadelphia, to a surprising extent; several years since the garden pond of Henry Pratt, Esq. gave way, and all the gold fishes escaped to the river just above the Fairmount water works. When the water is clear they may be seen in great numbers in the slack water which extends for five miles. The boys catch them in nets, as they will not take the hook, and after a freshet I have seen them left in holes of rocks on the banks, whence they are taken and sold to those who admire them in globes; but accustomed to liberty, these more generally soon die than survive to gratify the owner. The boys will sell them for a shilling each, and they might be transported with advantage to mill ponds, where they would become permanent and not unprofitable tenants.—*J. J. S. Philadelphia, August 5th.*

.....
THE BIDDLE VINERIES.—It may interest some of your grape growers to learn that Mr. John Sherwood has rented for a series of years the enormous graperies erected at great expense by the late Nicholas Biddle, at Andalusia, on the Delaware. Though the vines have been neglected for some years, there is a fine crop this season, and no doubt with his care many tons in 1847. Black Hamburgh grapes are just ripening under glass here, (July 20,) where slight forcing has been used, and command readily at wholesale 37 1-2 cents the pound, *Philadelphia.*

MASSACHUSETTS HORTICULTURAL SOCIETY.

MASSACHUSETTS HORTICULTURAL HALL. }
 August 10th, 1846. }

Adjourned meeting. The President in the chair.

Walter Farnsworth, Roxbury, proposed for membership. The Society acknowledged the receipt of a copy of the "Charter and Constitution of the Cincinnati Horticultural Society."

The President read a letter from the Rev. Henry Colman, of London, informing the Society that he had procured, and herewith forwarded the medals of the London Horticultural Society.

Voted, The thanks of the Society to Mr. Colman for his earnest endeavors in procuring the medals; and that the Corresponding Secretary transmit to Mr. Colman the thanks of the Society.

Voted, That the Recording Secretary be requested to procure a suitable book for registering the names of persons proposed for membership.

Voted, That the Society subscribe for a copy of "The Horticulturist."

The following members were elected.

Jeremiah Sheehan, Salem; W. T. G. Morton, West-Need-

John J. Ames, A. C. Noyes, G. W. F. Thayer, Boston;
A. S. Loomis, R. A. May, Jr.,
Andover; F. L. G. West.

Saturday, Aug. 1st, 1846. The President in the chair.

The President called to the Society, that the medals proposed by Mr. Cushman, had been handed over to the Committee.

A letter was read from the New-Haven Horticultural Society, requesting this Society to send delegates to attend the annual convention to be held in October next. — Land over till future meeting.

Adjourned to Saturday, 29th inst.

Attest.

EBEN. WIGHT, Rec. Sec.

Exhibition of Saturday, July 25th, 1846.

FLOWERS.—From Messrs. Winship, an elegant circular bouquet, composed of White and Purple Phlox, Delphiniums, Fuchsias, &c.

From Sumner Crosby, steward of the Boston Lunatic Hospital, three fine varieties of Double Hollyhocks.

From Walker & Co., fine Dahlias in variety, Carnations, a fine double purple Gillyflower, Phloxes, Variegated Aconite, Draccephalum virginianum, and other cut flowers.

From Joseph Breck & Co., Liliun superbum, (fine specimens,) ten varieties of Double Hollyhocks, Liliun longiflorum, Funkia cœrulea, Phloxes, Rudbeckia purpurea, Digitalis aurea, Aconitum variegatum, Barbaena aurea, Oxalis chrysanthemoides, Clarkea rosea and elegans, Gaura, Dahlias, Gilia tricolor, Catananche cœrulea, Iberis in variety, Phlox drummondii in variety, and other cut flowers; also three bouquets.

From James Nugent, four bouquets, double Imperial Pink, and Ferraria tigris pavia.

From Thomas Motly, Jr., by John Galvin, one oval shield bouquet or design.

From John A. Lowell, by William Doyle, one large flat circular bouquet.

From William Kenrick, by Miss Russell, one large and six small bouquets, Spiræa palmata, Variegated Elder, Dwarf Horse Chestnut, and other cut flowers.

From Hovey & Co., four fine plants of Liliun lanceofolium alba, and two of Liliun speciosum, all magnificent specimens, from one and a half to six and a half feet high—from one foot there were four spikes; also a bloom of L. lanceofolium roseum, new and rare, the first time of exhibition—the colouring and spotting of the flower is intermediate between punctatum and speciosum; also four plants of Achimenes, including one of pictum.

From William Mandell, Dahlias, Double Hollyhocks, Roses, and other cut flowers.

From R. West, Salem, by Jeremiah Sheehan, a curious and very elaborate design, composed of Dahlias, Gillyflowers, Pyrethrums and other flowers on a moss foundation. It represented a coat of arms surrounded by an area of stars, a Dahlia in the centre of each star, the points made of Pyrethrums.

From J. L. L. F. Warren, sixteen bouquets, Roses, Pinks, and Dahlias, Funkia cœrulea, Draccephalum virginianum, Aconitum variegatum, Gillyflowers and others.

From Parker Barnes, one bouquet and two pots of Achimenes, ten fine varieties of Double Hollyhocks, Pinks, Gillyflowers, Dahlias, Roses, Verbenas, Lupins, Cinerarias, Gladiolus floribundus, Pyrethrums, Delphiniums, Iberis, Scabiosas, Loniceræ, and a profusion of other cut flowers.

From W. B. Richards, Bignonia radicans, Dahlias, Iberis, Digitalis, Campanulas, &c.

From William Meller, fine Pinks, Dahlias, Roses, two bouquets, and specimens of Dwarf Esculus.

From R. M. Copeland, a plant of Eugenia australis.

From John Hovey, two bouquets, fine Carnations, Ferraria tigris pavia.

For the Committee,

JOSEPH BRECK, Ch'n.

AWARD OF PREMIUMS.

The Committee award to the Messrs. Hovey, a gratuity of \$3 for fine specimens of Liliun lanceofolium, and other varieties enumerated above; and to Jeremiah Sheehan, a gratuity of \$1 for a fanciful design. To Messrs. Winship a premium of \$2 for the best bouquet; and to Miss Russell a premium of \$1 for the second best bouquet.

FRUITS.—D. S. Greenough, Roxbury, Citron des Carmes Pears.

Seedling Gooseberries and Early Harvest Apples, by John Hovey, Roxbury.

Mr. W. W. Allen, Concord, a Persian Melon.

Miriam Pratt, Watertown, by Alexander McCreeman, two Persian Melons.

T. H. Perkins, by William Quant, two Persian Melons.

John Fisk Allen, Salem, Citron des Carmes Pears, four boxes of extra fine Raspberries, two dishes of very fine Peaches, viz., Crawford's Early and Yellow Rareripe, superb specimens of Elvage Nectarines, also a dish of Young's Hative; ripe Black Haws. Grapes, viz., Black Providence, Fern, Rose Chasselas, Grizzly Frontignan, Black Hamburg (fine,) Golden Chasselas (very fine berries,) Red Traminer Esperione, Chasselas de Bar sur Aube, Zinfandel, Verdelho Aleppo, and White Frontignan.

G. Johnson, Lynn, Black Hamburg and Zinfandel Grapes. Cheever Newhall, Dorchester, a box of very fine Blackberries and a box of Knevet's Giant Raspberries.

E. E. Bradshaw, Charlestown, four boxes of Franconia Raspberries.

Capt. F. W. Macondry, a dish of fine Peaches, var. Sharp's Seedling; also a dish of large Figs not quite ripe.

Fastloff Raspberries, by Messrs. Hovey.

J. L. L. F. Warren, Brighton, six boxes of Franconia Raspberries.

Aaron D. Williams, Roxbury, two boxes of Red and two boxes of White Currants.

For the Committee,

S. WALKER, Ch'n

VEGETABLES.—From W. B. Williams, Endive.

From A. D. Williams, Cabbages and Carrots.

From Henry Ford, specimens of White Winter Wheat of an extra fine quality, grain very plump and full, the straw fine and a half feet high.

For the Committee.

A. D. WILLIAMS, Jr., Ch'n.

Exhibition of Saturday, August 1st, 1846.

From M. P. Wilder, President of the Society, Phlox œil de lynx, a very beautiful new variegated variety, and P. marianne.

From J. L. L. F. Warren, Gladiolus helvideros, a superb new variety, fine seedling Phloxes, White Water Lilies, Dahlias, fine specimens, Pinks, &c.; also one large and eleven small bouquets. Among the Dahlias were good specimens of Queen Mary (new,) Essex Triumph, Reine de Fées, Antagonist, La Lionne, Sir J. Richardson, Sulphurea elegans, Imperial Blush, &c.

From Hovey and Co. four bouquets, Pinks, Gladiolus gandavensis, Double Hollyhocks, Phlox drummondii, Phloxes, and other cut flowers.

From Joseph Breck & Co., Gladiolus gandavensis, psittacinus, and floribundus, Phlox maculata alba, lawrencei, nymphaea alba, omiflora magna, Freelinghuysen, Marianne, blanche neuvilly, picta, almerine, meechanica speciosa, cordata speciosa, nana, wilderi, Richardsonii, acuminata and drummondii in variety; Dahlias, Verbenas, Rudbeckias, Aconitum variegatum, Clarkea, Liliun tigris and longiflorum, Enocheras, Mimulus, and other cut flowers; also eleven bouquets.

From Walker & Co., Dahlias, Phloxes, Double Gillyflowers, Gladiolus floribundus, Draccephalum, Rudbeckia fulgida, Veronica virginica, Iberis in variety, Sweet Sultan, &c.

From O. H. Mather, fine Phloxes, Verbenas, Dahlias, Cape Jasmine, Iberis, Double Imperial Pinks, Coreopsis, &c.

From William Kenrick, by Miss Russell, one large and three small bouquets.

From Parker Barnes, a fine specimen of Ipomopsis elegans, Ferraria tigris pavia, fine Double Hollyhocks, Gladiolus floribundus, Dahlias, Geraniums, Roses, Verbenas, Double Balsams, Pinks, Delphiniums, Iberis, and also one fine bouquet.

From Messrs. Winship, Liliun superbum, Fuchsias, Gloxinias, Perpetual Roses, Phlox drummondii, various sorts, Phloxes, Clematis verticillata and flammula, Aconitum variegatum, Lythrum verticillatum, Asclepias decumbens, Delphiniums, Verbenas, &c.

From W. B. Richards, Dahlias, Verbenas, Digitalis, Pinks, with other cut flowers.

From William Meller, two bouquets, fine Dahlias, Pinks, Verbenas, Hollyhocks, Ferrarias, &c.

From John L. Gardner, by Daniel Crowley, a splendid display of *Phlox drummondii*.

From John Hovey, one large circular bouquet, composed of *Phloxes* and other flowers.

From James Nugent, two bouquets, fine *Dahlias*, and *Ferarias*.

From R. West, by Jeremiah Sheehan, one large circular bouquet.

From John A. Lowell, by William Doyle, one very large, flat, shield-like bouquet, a design finely arranged.

From G. Gilbert, Plymouth, a magnificent display of native plants, viz., *Sabbatia chloroides*, two varieties, pink and white, very beautiful, *Orchis fimbriata* and *blepharigottis*, *Aselepias decumbens*, and *Lobelia cardinalis*. We have not witnessed any display of exotics that would exceed the beauty and delicacy of these showy indigenous plants.

PREMIUMS.

The Committee award to R. West of Salem, for the best bouquet, a premium of \$2; and to J. L. L. F. Warren, for the second best bouquet, a premium of \$1. The Committee also award to Miss Russell a gratuity of \$1; and to Wm. Doyle a gratuity of \$1 for designs.

For the Committee, Jos. BRECK, Ch'n.

FRUITS.—The President of the Society presented some specimens of the Doyenne d'Ete and Golconda Nova Pears, both of which we class as second rate. Mr. Wilder also presented a specimen of the Jolemont Pear, which was not in eating; also an Apricot, var. *Angoumois hatif*.

Hovey & Co. presented specimens of Doyenne d'Ete Pears. Thus far in the season the Committee have not issued of any new variety of the Pear equal to the Citron des Carmes.

From Otis Johnson, Grapes, Black Hamburg, and Zinfandel, (fine); Pears, Citron des Carmes.

From John Hovey, Apples, Early Harvest.

From F. W. Macondry, Peaches, Sharp's Seedling, fine.

From A. D. Williams, Apples, Early Bough and Sapsavine; Pears, Citron des Carmes.

From J. Richardson, Plums.

From T. H. Perkins, Peaches, Heath and a variety unknown, fine; also a Persian Melon.

From J. F. Allen, Raspberries, Franconia, (fine); Peaches, Yellow Rarapier, Early Crawford, Noblesse, Kendrick's Orange; Grapes, Grizzly Frontignan, Red Traminer, Black Prolific, White Chasselas, Esperione, Chasselas de Bar sur Aube, White Nice, Black Hamburg, Verdelho, Zinfandel, White Frontignan, Black Portugal; Nectarines, var. *Violette hatif*, Elruge and a variety.

From J. L. L. F. Warren, Wood Strawberries, Franconia Raspberries, St. Peter's and Black Hamburg Grapes.

From George Walsh, Apples, Sapson, (?)

From Alexander McLellan, Melon, Persian green flesh.

From E. M. Richards, Apples, Red Astrachan.

For the Committee, S. WALKER, Ch'n.

VEGETABLES.—From A. D. Williams, one dozen of extra fine Tomatoes.

For the Committee, A. D. WILLIAMS, JR., Ch'n.

Exhibition of Saturday, August 8th, 1846.

FLOWERS.—From M. P. Wilder, President of the Society, a new *Dahlia*, Madame Villabois, fine *Phloxes*, viz., *Harrisonii*, *Richardsonii*, *Henry Clay*, *Frelinghuysen*, *Earl de Lynx*, and *speciosum*; and fine new *Petunias*, viz., *Lady Alice Peel*, *Hebe*, *Beaute Parfait*, *Beaute de Jour*, and *Lucidum*, and one fine seedling; three new *Verbenas*, *Polkii*, *Eclipse*, and *Boule de feu*, also *Gloxinias* and *Combretum purpureum*.

From T. H. Perkins, by Wm. Quant, a fine display of annuals, viz., ten or twelve very fine varieties of Double Balsams, *Malope grandiflora*, *Portulacca splendens* and *thessalonii*, *Iberis*, of sorts, *Erysimum*, *Escholtzia*, *Gillias*, *Gomprenas*, *Celosia cristata*, fine specimens, *Hibiscus africanus*, *Alyssum*, *Calliopis drummondii*, *Schyzanthus priestii*, Sweet Peas in variety, *Convolvulus minor*, *Phlox drummondii*, German Asters, *Xeranthemums*, *Zinnias*, fine *Marigolds*, *Dianthus annuus*, &c.; also *Gladioli* and other flowers.

From William Meller, two fine bouquets, thirteen varieties of *Dahlias*, *Verbenas*, *Roses*, Double *Gillyflowers*, fine *Gladioli floribundus*, and other cut flowers.

From James Nugent, fine *Dahlias*, *Discoidea cærulea*, *Ferarias*, and other cut flowers; fine specimens of Carter's White *Phlox lawrencii*; also four bouquets.

From Messrs. Winship, fine hardy Perpetual *Roses*.

From J. L. Gardner, by Daniel Crowley, a magnificent display of Sweet Peas, *Phlox drummondii*, and thirteen fine seedling *Verbenas*, and other cut flowers.

From S. A. Walker, Brookline, fine Double Balsams, large *Marigolds*, Double *Gillyflowers*, *Iberis*, *Zinnias*, *Elichrysiums*, *Celosia*, and other cut flowers; also six bouquets.

From Parker Barnes, one fine circular bouquet, fine specimens of *Gladioli floribundus*, Double *Hollyhocks*, *Phlox Frelinghuysen*, *Ipomopsis elegans*, *Verbenas*, *Dracocephalus dentatum*, *Dahlias*, *Noisette Roses*, &c., a dish of fine Double Balsams.

From W. E. Carter, a fine display of *Phloxes*, viz., *Wilderei*, *Lawrencii*, *Henry Clay*, *Russelliana*, (fine variegated seedling,) *suaveolens*, a fine new seedling, flowers white, delicately pencilled with pink, with purple tubes, flowers in large pyramidal panicles; two varieties of *Galaria*, bicolor and aristata, *Pentstemon campanulatus* and *gentianoides*, *Convolvulus panduratus plena*; also six pot plants, viz., three *Gloxinias*, *Fuchsia*, *Scilla maritima*, *Crassula tuberculosa*, and *Silphium kerebinthiaceum*; also three bouquets.

From W. Kenrick, by Miss Russell, one large and two small bouquets, and basket of flowers, cut flowers, &c.

From E. Wight, fine *Dahlias*, *Mounjoy Prairie Rose*, new and fine.

From W. B. Richards, fine *Dahlias*, *Agapanthus umbellatus*, and *Bignonia radicans*.

From Jos. Breck & Co., eight bouquets, ten varieties of Double Balsams, *Gladioli grandavensis*, *Dahlias*, *Verbenas*, *Phlox drummondii*, Double *Gillyflowers*, *Rudbeckias*, a great variety of fine *Phloxes*, among them, *Henry Clay*, *Pietà*, *Charles*, *Lawrencii*, *Wilderei*, *Richardsonii*, *paniculata alba*, *Harrisonii*, *decussata alba*, *Marianum* and others; also *Alonsoa grandiflora*, *Clarkesæ*, fine *Godeenias*, *Lavateras*, with other annuals and perennials in great variety.

From Walker & Co., *Dahlias*, *Campanula pyramidalis*, *Phloxes* in variety, fine specimens of *Gladioli floribundus*, Double Balsams, *Verbenas*, Double *Imperial Pinks*, Double *Gillyflowers*, *Lilium tigrinum*, and other cut flowers; also two bouquets.

From S. H. Hayward, East Boston, *Dahlias*.

From J. L. L. F. Warren, three round and ten flat bouquets, a fine display of specimens of *Gladioli belviderus*, *Gladioli floribundus* and *psittacinus*, Double Balsams, and cut flowers in variety. Among the *Dahlias* we noticed the following new ones, viz., *Monsieur Walner*, *Queen Mary*, *Indispensable White*, *Imperial Blush*, &c., &c.

From S. Gilbert, Plymouth, fine indigenous plants, viz., *Clethra alnifolia*, *Clematis virginica*, *Rexia virginica*, *Orchis fimbriata*, *Lobelia cardinalis*, *Orchis blepharigottis*, *Rudbeckia rosea*, *Spiraea tomentosa* and *salicifolia*.

From Messrs. Hovey & Co., a collection of fine *Roses* and *Phloxes* in variety.

From J. W. Mandel, *Dahlias*, Double Balsams, *Asters*, *Verbenas*, *Gloxinias*, and two bouquets.

From William Doyle, a beautiful circular bouquet.

PREMIUMS AWARDED.

The Committee award the following premiums: To Wm. Doyle, for the best bouquet, first premium of \$2; to Miss Russell, the second premium of \$1, for a bouquet. The Committee also award a gratuity of \$1 to W. E. Carter, for a plant of the *Scilla maritima*.

For the Committee, Jos. BRECK, Ch'n.

FRUITS.—Grapes, by John Fisk Allen of Salem. Twenty varieties of green-house Grapes, viz., *Aleppo*, Red Chasselas, Golden Chasselas, White Chasselas, Black Hamburg, Black Hamburg (Wilmot's New), Black Hamburg (Wilmot's No. 16), the latter very sprightly and fine, Grizzly Frontignan, White Frontignan, White Nice, Red Framingio, White Gascoigne, Zinfandel, Esperione, Tottingham, Park Muscat, Black Prolific, Verdelho, Black St. Peters, Black Portugal, Black Tripoli (new), being a larger number of varieties than has ever been exhibited at any of our weekly shows. Mr. Allen made a display of some of his handsome Peaches, Nectarines and Apricots. We omitted to state last week, that some of Mr. Allen's Peaches, then on our table, weighed upwards of half a pound each; also Jargonelle Pears and Franconia Raspberries.

Very fine specimens of the Red Astrachan Apple, by O. Johnson of Lynn, who also exhibited specimens of the New-hall Apricot, from the garden of Paul Newhall, Esq. of Lynn, who raised this variety, and which, in the opinion of the Committee, may be classed among the best. It is not quite number one in size, but is very delicious in flavor.

Island Moss, by Thomas Needham of Brighton.
 Joseph A. Walker, Worcester (?) 1950
 Summer Wrecker Rosebush, Seeding and Red Dutch Currants, and Green Chisel Peas.

T. H. Perkins, Brookline, by William Quant, Black Hamburg, Grassy Frontingman, White Frontingman, Black Frontingman, White Nice, and Mosaic of Alexandria grapes. The Grassy Frontingman, Black Frontingman, and Black Hamburg, Mosaic of the latter.

Cheever Newhall, Dorchester, Benoni, Summer Rose, Williams' Favorite, and Curtis' Early apples.

Joseph Lovett, Beverly, fine specimens of Blackberries.
 Samuel Pond, Cambridgeport, Duane's Purple, Red Orleans, Apricot and other Plums.

Summer Crosby, steward to the B. L. Hospital, Plums.
 Parker Barnes, five boxes of Apricot Plums, and two dishes of Jargonelle Peas.

Samuel A. Walker, Brookline, Moorpark Apricots.
 Wm. Meller, Roxbury, Early Bough and other Apples.
 James Eustis, South Reading, Early Harvest Apples.
 Capt. Macdonald, Peaches, var. Sharp's Seedling and Apricots.

Charles E. Grant, of Roxbury, Moorpark (?) Apricots.
 Hovey & Co., Boston, Moorpark (?) Apricots.
 For the Committee, S. WALKER, Ch'n.

VEGETABLES.—Ornithogolum, or California Soap Onion, brought from the coast in the ship California, five and a half weeks since, is used for washing clothes, and equal to any soap for that purpose. Presented by Geo. Webster Mecum, Boston.

Exhibition of Saturday, Aug. 15, 1846.

FLOWERS.—From M. P. Wilder, fine new Dahlias.

From J. Gilbert, Plymouth, a fine display of indigenous plants, embracing the species enumerated last week, together with a number of other sorts, viz., Lobelia cardinalis, var. incarnatum, with some other curious plants.

From George J. Sprague, a fine white Dahlia, var., Cheltenham Queen.

From John Parker, Roxbury, fine Dahlias and Balsams.

From Messrs. Winslow, one large bouquet.

From Hovey & Co., fine Phloxes, Roses, Ferrarias, and cut flowers in variety.

From O. H. Mather, a fine specimen of Buddelia lindleana, Dahlias, Fuchsias, Phloxes, &c.

From Edward Winslow, by F. W. Mandell, fine specimens of double Delphinium consolida, Dahlias, Double Balsams, and other cut flowers; also four bouquets.

From W. E. Carter, a fine display of Phloxes, three bouquets and cut flowers in variety.

From Wm. Kenrick, by Miss Russell, three large bouquets and cut flowers in variety.

From S. A. Walker, four bouquets, fine Double Balsams, and cut flowers in great variety.

From John A. Lowell, by William Doyle, a plant of Cattleya harrisonii, a rare orchideous plant; also a round pyramidal bouquet or design.

From John Hovey, Dahlias.

From J. S. Cabot, Phloxes, var., Speciosa, Broughtonii, Pottii, Divaricata alba, Blanc de Neuilly, Nymphaea alba, Neumannii, Princess Mary Ann, Purpurea violacea, (Eil de Lynx, Ninon de l'Enclos, Rosea superba, Amenissima, New Blush, Mazeppa; also Lychins dioica flore plena alba, Buphthalmum speciosissimum, Lythrum roseum, Galardia sanguinea, G. coronata, G. picta coccinea, Aconitum hallerii, A. speciosum, A. pyrenaicum, Rudbeckia pinnata.

From T. H. Perkins, by Wm. Quant, splendid Double Balsams, nineteen varieties of annuals, and other cut flowers in great abundance.

From Jos. Breck & Co., Double Balsams in variety, Phloxes, twenty-five varieties of annuals, Dahlias, and other cut flowers in variety; also three bouquets.

From J. L. F. Warren, one large and thirteen small bouquets, White Water Lilies, fine Double Balsams, Gladioli, Phloxes, &c.

From Walker & Co., a fine display of Double Balsams, Phloxes, Dahlias, &c. two pots of fine Balsams, and one large tray of fine varieties.

From Parker Barnes, fine Double Balsams, Dahlias, &c.; also a fine specimen of Ipomopsis elegans, and one fine bouquet.

From J. L. Gardner, by Daniel Crowley, four plants of Achimenes and two of Fuchsias.

From James Nugent, one large circular bouquet or design for the Bradlee vase.

AWARD OF PREMIUMS.

On Phloxes and Pot Plants: William Quant, David Hagerston and Parker Barnes, Judges. First premium of \$5 to J. S. Cabot; second premium of \$4 to Walker & Co.; third premium, \$3, to Breck & Co.

On Pot Plants. The committee recommend a gratuity of \$2 to Wm. Doyle for a beautiful plant of Cattleya harrisonii.

On Balsams, Designs and Bouquets. Messrs. Carter, Hovey and Dutton, Judges. On Balsams, for the best display, the first premium of \$3 to William Quant. For the second best, a premium of \$2 to J. L. F. Warren. For the third best, a premium of \$1 to Walker & Co. On designs the Judges award a gratuity of \$2 to James Nugent, for the best, and to Wm. Doyle, \$1 for the second best. On bouquets, the first premium of \$2 to Miss Russell, for the best large bouquet, and to Mr. J. L. F. Warren, a premium \$1 for the best small bouquets.

The committee recommend that a gratuity of \$3 be awarded to W. E. Carter, for a display of fine seedling Phloxes. Mr. Carter has been very successful in raising a great number of very beautiful varieties.

For the Committee, JOSEPH BRECK, Ch'n.

FRUITS.—From S. A. Walker, Pears, Dearborn's Seedling; Plums, Italian Damask; Apricots, Moorpark, (?) and a variety without name.

From Otis Johnson, Pears, Jargonelle, Apple Pear of Essex county; Plums, Fotheringham, very fine; Apples, Red Astrachan and Early, Bough, extra fine, and others without name.

From A. D. Williams, Apples, Williams' Favorite; Pears, Jargonelle.

From Col. T. H. Perkins, by Wm. Quant, Peaches, Royal George, fine; Melon, Persian green-fleshed.

From Anson Dexter, Apples, Summer Rose.

From E. E. Bradshaw, Moorpark Apricots; Plums, Bradshaw, very large and a good variety. The Committee have eaten and seen this plum for two or three seasons, and as they cannot find the true name, for the present call it the Bradshaw.

From Josiah Lovett 2d, Blackberries, very large.

From H. K. Moore, fine Moorpark Apricots.

From B. D. Emerson, Grapes, White Chasselas.

From Parker Barnes, Apricot Plums.

From Andrew Wellington, River Apple.

From Samuel Pond, Plums, Washington, Pond's Seedling, Duane's Purple, Jefferson, (?) Royal de Tours.

From F. Tudor, Esq., Nahant, very large figs, open culture.

From J. L. F. Warren, Pears, Dearborn's Seedling, and another kind; Grapes, Black Hamburg; Apples, River.

From R. Manning, Pomological Garden, Salem, Apples, Mabel; Pears, Hastings.

From W. H. S. Cleaveland, Burlington, N. J., Black Hamburg Grapes.

From Samuel Hildreth, Seedling Plums.

From Mr. Haven, Pear, Cuisse Madam. (?)

From M. P. Wilder, Esq., Pears, Bloodgood.

From S. Walker, Chelsea, Plums, fine.

From Hovey & Co. Turkey Apricots.

From Wm. B. Richards, Dedham, Grapes, Black Hamburg, and Chasselas.

From John Fisk Allen, Nectarines, Hunt's Tawny, Elruge and Golden; Peach, Nivette; Pears, August Muscat; Fig, White of St. Michaels; Grapes, Zinfandel, White Nice, Black Hamburg, Wilmot's New, Wilmot's No. 16, White Gascoigne, White Chasselas, Esperiere, Ferral.

From George Walsh, Apples, Sapsavine.

From John J. Simpson, Providence, Pears, Dearborn's Seedling.

For the Committee, JOHN FISK ALLEN.



DESIGN FOR A SIMPLE COUNTRY HOUSE

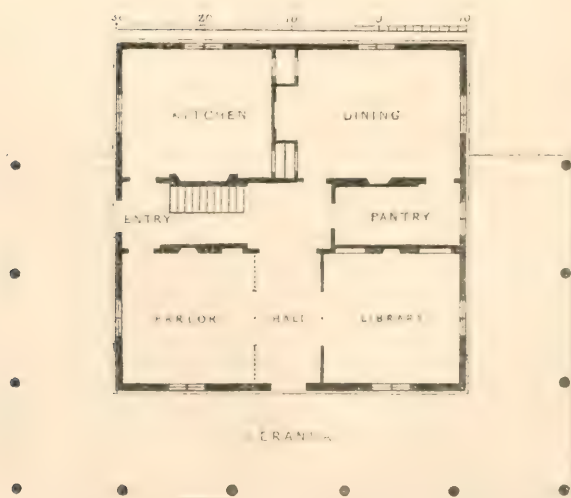


FIG. 11 PLAN OF PRINCIPAL FLOOR.

THE
Horticulturist
AND
RURAL ART

JOURNAL OF RURAL ART AND RURAL TASTE.

VOL. I.

OCTOBER, 1846.

No. 4.

"CAN A COUNTRY HOUSE be plain and yet tasteful? I wish to erect a house of moderate size on my farm in the country. I do not wish a highly architectural building—it would not accord with the simple character of my estate, or with my mode of life. Yet I desire much to live in a house that shall not be uncouth and offensive, by its violation of all the principles of beauty. Nay, more— I wish a tasteful, simple, and pleasing dwelling, which to much comfort shall unite an agreeable architectural expression."

Such is the substance of some queries addressed to us by a gentleman of intelligence and judgment, a short time ago, and such, as we judge from several letters we have received respecting the subject of *simple rural cottages*, touched upon in our last number, is the feeling of many country gentlemen, who are about to erect country residences.

We have before us a letter from Boston. The writer, who is personally unknown to us, says, "Nothing that has ever appeared in this country, on the subject of rural buildings, has given greater satisfaction here, than the leader in the September number of the *Horticulturist*. There is something

native and true in the remarks on the kind of buildings recommended for rural purposes, which would lead me to hope that we may, by and by, have a style of building of our own, founded on just and sound principles, which shall be to us what the original ideas involved in the classical and pointed styles were to the ancients."

What our correspondent probably means is, that rural architecture, to be entirely satisfactory with us, must be *significant*; that is, it should, so far as possible, express the life and habits of our rural people. Hence, while it is perfectly allowable for the man of wealth and leisure to indulge his taste in a dwelling of any style that is a becoming one for his location, it is scarcely suitable for a farmer or rural cottager to do so. And this simply, because no person should undertake a highly ornamental cottage or villa, who cannot afford to carry out the same degree of completeness, in finish and decoration, in his garden and grounds. A richly decorated country house, with a badly planted and badly kept territory about it, is a sight as painful as that of a man of learning and accomplishments starving in the midst of a rude and barbarous people.

Now the life and habits of our farming

population are in the main dignified and free, yet plain and simple. Their means will neither allow them, nor their tastes lead them, to build or keep up any but simple and fitting houses and grounds. Hence we conceive all rural buildings which, in the end will prove most significant, tasteful and agreeable for them, must be simple in character, and unambitious in style. Such houses will always be found satisfactory, and the neat and quiet grounds, which they demand as accessories, are within the reach of almost every landholder in America.

A few days since, we were looking over the portfolios of some of our leading architects in New-York, admiring the cottages and villas which they showed us as in progress, or as having been designed for various parts of the country. In examining the richly stored portfolio of Mr. DAVIS (whose well known *atelier* is in the Merchant's Exchange,) our attention was attracted by one, a *Design for a simple Country House*, which appears to us in a good degree to answer our views, as expressed in this and our last leading article. Mr. DAVIS has kindly permitted us to place this design in the hands of our engraver, and our readers will observe it as our present frontispiece embellishment.

There is nothing in this elevation, fig. 42, which could be objected to as out of keeping with rural life in most parts of our country. There are no useless and unmeaning ornaments, and there is no attempt at high or false architectural style. Yet there is much comfort, and as much beauty, we think, as the subject demands. In other words, it answers the description of our friend with whose remarks we commenced this article—"a plain and tasteful country house."

Our readers will notice, in the first place, that it has an ample *veranda* (or *piazza*, if our readers like this incorrect term better.) A veranda, as frequently built, with fluted

columns, &c., is a costly affair. But this is not so. It is positively cheap. The supports are simple, light sticks of timber hewn octagonally or eight sided, leaving a few inches at the top and bottom square, for *base* and *capital*. The roof of this veranda is made of nicely jointed stuff, nailed upon the joist rafters, which are beaded and left exposed, so that no other ceiling is required. On the top it is covered with shingles or tin. And yet this veranda is to our eyes, in point of taste, most agreeable and appropriate. As a matter of comfort, in this climate, such a veranda—so spacious, ample and shady—is equal in value to any two of the best apartments in the house.

The second story of this dwelling gives seven cool and pleasant bed-rooms of full height. The roof has a bold and pleasing projection, which will help to keep the upper windows shaded in summer. There is scarcely an ornament here which does not grow out of the strictest propriety; and yet, for that best of reasons, the beauty of this building, as a simple country house, is far more significant and true than that of most of the imitations of the highly ornate styles of cottage.

The plan of the principal floor of this house, fig. 43, almost explains itself. The parlor and library are on opposite sides of the entry or vestibule, opening into it with either double or sliding doors, so that the whole may, when agreeable, be thrown into one apartment. Some persons would, doubtless, prefer to change the arrangement of this floor, by turning the parlor into a bed-room, and using the library as a parlor.

There is a peculiarity in the arrangement of the dining-room which is worthy of notice. A recess is indicated in the plan, where a *sideboard* is to stand in the dining room. This sideboard is to contain, in one of its portions, a *wicket*, i. e. a closet opening

through to the kitchen, by which all the dishes may be received, and returned again when empty, without the labor of carrying them through the house, or the savory odor which that process often disseminates.

Our readers will notice that the chimneys are all kept in the body of the house, and not allowed to expend their warmth in outside walls—an arrangement to the benefit of which we can fully testify from experience.

This dwelling is one which it is proposed to build of wood, after the vertical mode of weather boarding described in our last number. As this is a dwelling of a grade superior to those represented in figs. 30 and 31, the best materials ("sound and clear stuff") should be chosen for this weather-

boarding, which may be carefully planed, painted and sanded.

On the rear of the house, where the veranda does not extend, it is proposed to have a large *area*, leading to a fuel cellar under the kitchen, and to a dairy and other cellars under the rest of the house.

The form of the house is a square of forty feet, and the arrangement of such a space is so simple that it may be varied at pleasure. What we chiefly desire, at the present moment, is to draw attention to the simplicity, good taste and economy, of the exterior of the design, which we conceive to be quite in accordance with our own views regarding the principles of propriety in simple rural architecture.

Horticultural, Topographical, and other Notes on St. Louis.

BY THOMAS ALLEN, OF CRYSTAL SPRINGS, MO.

[THE following is from the pen of our obliging Missouri correspondent, THOMAS ALLEN, Esq. of St. Louis. We have seen no account of any part of the GREAT WEST so full of real information to those interested in rural affairs, or with that intelligence so concisely, justly and correctly conveyed. Had we such data, as this article furnishes, from every great natural district in our country, we should consider ourselves possessed of quite a treasury of knowledge, which might be brought to bear almost daily on the subjects within our province.—ED.]

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The parallel of latitude in which the city of St. Louis is situated, is $38^{\circ} 37' 28''$. It is about the parallel of Cape Henlopen on the Atlantic, of Lisbon in Portugal, and of the Bay of San Francisco on the Pacific. The city is 1,390 miles from the Gulf of Mexico; 850 from Washington City; 174 above the mouth of the Ohio river, and 18

miles below the mouth of the Missouri. It is 382 feet higher than the level of the Gulf of Mexico. The Mississippi runs past it with a current of from four to six miles per hour, and with a fall of about one foot in six miles. The city stands about eighty feet above ordinary low water of the river. This eminence extends along the river bank many miles above and below the city, with occasional intermissions, and is, in some places, a limestone bluff, and in others a succession of small hills or knolls. The substratum of the whole is limestone rock, on which rests a dry and tough yellow clay, suitable for making brick, overlaid generally with about a foot in depth of mould. In the valleys and prairies further west, this mould is much deeper, and in the intervals or bottoms near the river, the soil is alluvial, black, deep, and fertile. An extensive alluvial intervalle, called the "American Bottom," lies along the river opposite St. Louis in Illinois.

It is about seventy miles in length, and of an average width of about five miles, and contains nearly a quarter of a million of acres—the surface heavily laden with rank vegetation, or cut up by lagoons, bays, coves and creeks. The bluff which bounds it on the east, contains bituminous coal as well as limestone. Some of the ridges along that bluff are sandy. On both sides of the river are found mounds or tumuli, supposed to have been raised by the Indians as monuments of their dead. Some of the prettiest of these are near the river, on the highest natural elevation in the present city of St. Louis. The surface of the ground near St. Louis is otherwise uneven, and sometimes rough, and in many places perforated by sink-holes of a tunnel-shape, through which the water drains into caves or fissures in the rocks below. Several of these caves, on account of their low temperature, are used by Germans for storing beer. When the outlets of these sinkholes are stopped, ponds are formed in them. Several fossils, some of them new varieties, have been found in the limestone. A greyish marble, beautifully variegated, and susceptible of fine polish, exists in the city; and I can point to my parlor chimney pieces, made of it, proud of a domestic production, superior in my estimation to the Italian. Bituminous coal exists in abundance, not only in the bluffs east of the "American Bottom," but at various depths within three miles of the city west, and also upon the Missouri river. Springs are sometimes found of excellent water, but they are not abundant. My farm, however, is blessed with five of them—hence its name.

The soil of the level grounds, prairies and bottoms, is a black and deep vegetable mould of great and enduring fertility. Upon the uneven surface the soil is thin. The clayey subsoil exposed to the air, soon becomes

friable, and with the application of manure, productive. It, however, dries quickly by sun and wind, and sometimes bakes and cracks.

The climate does not correspond with that of the same latitude on the sea-coast. It differs in respect to the prevalency of certain winds, in variableness, and in being, perhaps not hotter, but drier in summer. Our spring seasons are often wet; our summers frequently dry. The autumn is often a perpetual "Indian summer," delightful as can be imagined. Yet frost appears sometimes in October, and November may bring severely cold weather. The consequences upon vegetation of a dry summer, succeeded by a fine and late-growing autumn, we may have occasion to advert to. The winters are generally mild. The average mean temperature of the winter months, for seven years being, for example, about 30°. Snow sometimes falls in various depths under 12 inches, but rapidly disappears. It not unfrequently happens that we can plough in every winter month, and for weeks together artificial heat is not required in our green-houses. Two winters ago, ice was not formed in sufficient quantities to supply our ice houses. Yet I have heard it said, that the Mississippi has been known to be frozen over below the mouth of the Ohio. Last winter that river was firmly closed above and more than sixty miles below this city for more than a month. In the mean time there were many warm and sunny days. The month of February often tempts all vegetation by its genial warmth, and the horticulturist has to lament the premature swelling of his fruit buds, doomed, alas! to repeated and killing frosts in March and even in April. Indeed the month of January is sometimes as mild here as the month of March generally is in Philadelphia. For example, the mean temperature of that

month in 1845 was 41°. Ducks and geese began to fly northward, bluebirds appeared, and several shrubs put forth leaves. Coldest point 22°, warmest 71°, range 49°. The mean of February was 43°; of March 42°; but the range was greater in both these months than in January. Coldest point in March 20°; warmest 74°; range 54°. In April the mean was 64°; coldest 30°; warmest 85°; range 55°. And in all the months of the year, we have sudden and great variations, the thermometer often ranging 20° within two or three hours. The frosts of early April generally find the apricot, the peach, the cherry, the plum, in full bloom. I have heard some of the older inhabitants insist, that a *full crop* of peaches is not realized more than once in five years, owing to premature blossoming. My own experience is corroborative of the general fact, which also applies to apricots and nectarines. Yet some of our trees wholly escape, and are overburdened with fruit; as is the case the present year, notwithstanding severe frosts near the middle of April.

In 1841, the greatest cold was 6° below zero, January 17. The greatest heat 102°, July 13. Variation 108°. Greatest heat in February, 70°; greatest cold, 4°. We consider a cold February and March most favorable for our fruit. The mean of February, 1845, was 43°. We had very little fruit that year. The mean of February, 1846, was 32°. We have an abundant crop. The greatest heat of the present unusually hot year all over the country, was 98° early in July. No rain of any consequence for more than two months.

The average mean temperature of seven years prior to 1836, according to our late Association of Natural Sciences, was as follows:

January, -	-	-	-	29.5
February,	-	-	-	34.5

March, -	-	-	-	42.7
April, -	-	-	-	58.6
May, -	-	-	-	65.2
June, -	-	-	-	73.1
July, -	-	-	-	78.1
August, -	-	-	-	74.6
September, -	-	-	-	66.9
October, -	-	-	-	55.8
November, -	-	-	-	49.2
December, -	-	-	-	33.7
				<hr/> 55.2 <hr/>

Annual range, 108°.

This is 5°.2 hotter than what is said to be the medium annual temperature of the whole earth. It is six or seven degrees hotter than the average temperature of London; two or three degrees *less* than that of Washington city; one or two degrees *less* than that of Cincinnati, Ohio, and New-Harmony, Indiana; if the published meteorological statistics of those places are correct. Only two degrees hotter than that of Philadelphia; and eight degrees hotter than that of Boston. About eleven degrees less than that of New-Orleans. Yet St. Louis has the reputation of being excessively hot.

The annual and monthly range of the thermometer is much greater at St. Louis than at London or New-Orleans. It is less than at Albany and Newburgh, and much less than that at many other towns in New-York. There is more uniformity and more humidity in the climate of London than in that of St. Louis. The thermometer will indicate as high a degree of "greatest heat" at Albany in summer, as it will in St. Louis; and in winter, it will show the "greatest cold" at Albany. But we have the greatest heat for the greatest length of time at St. Louis, and the sun's rays seem to be more direct and scorching. We have no mountains, except in the south interior part

of Missouri, while the country is comparatively flat far off to the north and the south, and vast prairies stretch to the east and the west of us. The prevailing winds follow the general course of our Great Valley, modified at times by the blasts from the great plains in the west, and from the prairies and lakes to the east and northeast. Fortunately for us, the east wind does not often, for many continuous days, bring to us the epidemic effluvia which are generated in the great Senegambian Bottom, that stretches along the opposite shores.

The average number of dry days of four years was 260 for each year; of wet days 105; of sunshine, 314; of no sunshine, 51; of thunder storms, 53.

The summer of the present year has been unusually dry, favorable for insects injurious to fruit, and would have proved entirely destructive to corn and potatoes, but for the rains of the last of August. But the year 1844 was more destructive from too much wet. I think, however, that, as we have no mountains, and the primitive forest is gradually disappearing, future observations will show that the average number of dry days will increase, and that the moisture of our soil and the waters of our streams and small lakes will diminish.

The nights of summer often *feel* as oppressively hot as the days, but not always. The thermometer sometimes falls twenty degrees soon after sunset. There is, in bright moonlight nights, an extensive radiation from the surface of the fields. The thermometer will indicate eight or ten degrees lower temperature at the surface, than it will at ten feet above. Dew is rapidly distilled. The night air is humid. Fogs sometimes arise, but they are not frequent. The commonest diseases of the country are bilious and remittent. New immigrants can scarcely labor in the field under the

scorching sun of summer. Ague and fever are often found in the low grounds and along the river "bottoms." Where vegetation is most luxuriant, there is the greatest decomposition. A vegetable diet is the most suitable for the summer months. Fruit also, in moderation, I believe to be better than animal food in warm climates. Fully ripe, and sound and healthy itself, it seems naturally adapted and intended for the use (not abuse) of man, but more particularly in that climate where the man and the fruit grow together.

The following table is an approximation to the times of the flowering, &c., of the fruit trees in St. Louis:

Apricots, - - -	Mar. 2 to Mar. 10.
Peaches, - - -	" 17 to April 1.
Cherries, - - -	" 30 to " 5.
Plums, - - -	" 30 to " 5.
Early Apples, -	April 5 to " 15.
Gooseberries, -	" " "
Pears, - - -	" " "
Winter Apples, -	" 25.
Strawberries, ripe, - - -	May 15.
Raspberries, " - - -	June 12.
Currants, " - - -	June 12.
Cherries, " - - -	June 12.
Apricots, " - - -	July 4.
Blackberries, " - - -	July 15.
Plums, " - - -	July 17.
Siberian Crab, " - - -	July 17.

Peaches and Isabella Grapes begin to ripen early in August, and are abundant the last of that month.

The Red Juneating Apple, or Early Red Margaret, sometimes bears two crops in one season, (the second inferior to the first;) and I have seen it blooming the third time the same season.

GARDEN OPERATIONS.—We sow seeds for early salad and cabbage under glass in January and February. Plant Irish potatoes for

early crop in February. Sow parsneps, carrots, radishes, lettuce, onions, cress, and early peas in open ground last of February, or early in March. About first of April, transplant broccoli, cauliflower, cabbage, lettuce, spinach, and plant sweet potatoes in hot-bed. Sow annuals (flowers) about first of May. Begin to cut asparagus early in April, and green peas are on our tables as early as the middle of May. We have had frosts, however, even after that time. Plant sweet potato sets about first of May. Dig early potatoes early in June. Corn of the Golden Sioux and Tuscarora kinds, and summer squash, eatable June 20. Gather garden seeds about the last of July. Early planting is essential to get crops well set before the summer drouth.

ANIMATED NATURE.—Crows stay with us all winter, and roost on the shrub oaks of the rolling land back of St. Louis, in tens of thousands, flying to the east side of the river early in the morning. They are chiefly injurious to corn in the ear. Robins, Larks, Bluebirds, and Buntings, appear in the warm days of winter. Wild Pigeons sometimes fly north as early as first of February. Ducks, Geese, Brant and Cranes fly north in February and March. Quails and Pinnated Grouse are abundant all the year. Sparrowhawks are very numerous in autumn, and feed on large grasshoppers. Birds in variety appear in March. Bees are often tempted out of their hives in winter; some years begin to work in March, and I have taken full boxes of newly made honey as early as the fifth of May. The same hive will, in favorable seasons, bear robbing three times, and throw off, perhaps, three or four swarms of young bees. Insects in countless numbers and variety flourish from early spring till November, attacking, some of them, every kind of shrub, tree, fruit and animal. The Red Spider, the Aphis, and

the Scaly Insect, infest our green-houses. The Striped Bug and others attack the *Cucurbitaceæ*, often destructively. The Curculio, the Peach-grub, and the Apple-worm, are all numerous, and in some seasons overwhelming. The Grasshopper, in summer, in dry seasons, is nearly as injurious as the locust. The Army-worm occasionally mows our meadows for us. The Gopher, or Pouched Rat, and the Mole, are injurious to our gardens; and the former sometimes burrows under the apple tree and destroys the bark of the roots. But we are diminishing the number of these little animals. Rats and mice are also numerous. We protect the birds and the toads, and multiply ducks and turkeys to aid us in our warfare against the insects.

BUILDING MATERIALS.—Our limestone works easily, and resembles granite in color, when dressed. Lime and sand are abundant. White pine is brought here from the Alleghany and from Wisconsin; yellow pine from the Missouri, the Gasconade, &c.; cedar from the St. Peters and the Missouri; black walnut, oak, maple, cherry, poplar, are sawed at our own mills in abundance. Bricks are readily made from the clay beneath us, and marble found in some of our quarries.

You will observe, then, that our soil is good, our summers long, and our winters mild; that our climate is quite variable; that we are liable to have warm February's, and late frosts; wet springs, and summers of drouth; late growing autumns suddenly terminated, and myriads of insects in great variety. We have, therefore, our advantages and our discouragements. Some years then, we shall be blessed with great crops, while in others we shall be nearly destitute of any. Some of the evils to which we are exposed, are susceptible of amelioration: others are beyond our control.

The average results encourage us to persevere in planting orchards, cultivating gardens, and otherwise improving our estates.

I may take another occasion to speak more particularly of the natural productions

of our forests and fields, as well as of our actual achievements in horticulture and other rural arts. Yours, &c.

THO: ALLEN.

Crystal Springs, St. Louis, Mo., Aug. 20, 1846.

THE STRAWBERRY QUESTION REVIEWED.

BY L. C. EATON, PROVIDENCE, R. I.

[THE "strawberry question" seems to be the *causa belli* of the day. The following article comes to us from our Providence correspondent, and we give place to it, though it is mostly of a speculative character, as perhaps representing the views of some who may differ from the opinions we maintain on this subject. We have received a great number of letters from cultivators in different parts of the country, since the publication of our views on p. 80 of this journal, expressing their assent to those views; and it is but just that there should be a representation from those who differ from us. We have commented anew on some leading points in Mr. EATON's article in the shape of notes which accompany it.—ED.]

.....

MR. DOWNING says, that Mr. LONGWORTH has established, in the eyes of the world, the important fact, "that, by his favorite mode of cultivating the Strawberry, viz., by planting a due proportion of staminate and pistillate plants, double the usual crop may be always obtained."

Whatever experience, as a horticulturist, Mr. Longworth may have, and however much of useful information he has acquired and disseminated, he would hardly claim the credit of establishing a fact, which has been for the last twenty-five years mentioned by most of the authors upon the cultivation of fruits, and repeatedly brought into notice

by communications published in our agricultural papers. Some cultivators in every part of the country have practiced upon it, and been successful in raising large crops.* Some, though their attention has been drawn to it, have neglected to profit by it, and others remain in total ignorance, and still continue to cultivate beds that will hardly repay their labor. The fact has been established, and the reason why it is not more generally known and practiced upon, has not, as we apprehend, been owing so much to the incredulity of botanists, as LONGWORTH suggests, for they have little to do with cultivating fruit, as to the neglect of many of our farmers, gardeners and even nurserymen, to inform themselves upon the subject.

MR. LONGWORTH says, that "our European gardeners admit that the principles contended for by him, are true in this climate, but still contend that, in Europe, all species are perfect in their blossoms, and

* Mr. Longworth does not claim, and we do not claim for him, the credit of *discovering* this fact. It had been ascertained or discovered long before, in Europe. But even there, it remains to this day a disputed point, among intelligent horticulturists, and is by no means *established*. Mr. Longworth, by continually keeping it before the public here, by testing it again and again, and more than all by the proof he has brought forward in the enormous product of the market growers of Cincinnati, who follow this mode, we consider entitled fully to the credit of having *established it*. A fact may be well known to a few, for a long time before it is "established in the eyes of the world." Fulton was not the first person who ascertained that steam might be used to propel vessels; yet no one will dispute that he *established* that fact.—ED.

there is no difference in the size and appearance of the blossom, which they now admit to exist with us."

This may be the opinion of some of the European gardeners, but certainly not of all. Some of them, to our knowledge are better informed.

The difference between pistillate and staminate plants is as well understood in Europe as here, and the method of selecting a due proportion of the two as much practiced upon.* It was discovered by KEENE, as Mr. LONGWORTH mentions, in 1809, and the subject was inquired into by the Horticultural Society of London in 1817. They addressed a letter to KEENE, and received an answer communicating the fact. PHILLIPS, shortly after, published his "Pomarium Britannicum." He speaks of KEENE's method of cultivating the Strawberry, and confirms the necessity of adopting it.

Mr. DOWNING contends for the principle that most of our strawberries, in their normal or original state, bear perfect flowers, and ["the large growing strawberries," Ed.] having a tendency to overbear in rich soil, run out into pistillate and staminate forms. We should judge that when he wrote his treatise upon fruits, he based his opinion upon that of LINDLEY; for, though he states that where a bed of plants is barren from a deficiency of stamens, it will become productive, if male plants are set "along side," or "near by," of which LINDLEY does not speak; yet he does not recommend this method, but says, "the true course is, not to waste the ground by putting out barren plants, but carefully to select, where

there is a tendency to sterility, only runners from the most fruitful perfect plants," and refers for authority to LINDLEY, who, he says, "covers the whole matter."* LINDLEY, when speaking of the distinction between sterile and productive blossoms, refers to the Hautbois class of strawberries. From the trial he made, both by cultivating plants obtained of others, and by raising plants from the seed, he condemned the practice of selecting any sterile plants. "In the cultivation of Hautbois strawberries, it will be recommended that the plants called males should be wholly rooted up as useless." (*Lindley's Guide to the Orchard*, p. 313.)

It may be possible that the varieties cultivated by him have perfect blossoms, but it seems more probable from what information we can gather with regard to this class, that he only destroyed the absolutely sterile plants, leaving other staminate plants with the female organs so far developed as generally to be productive, without which, however, the pistillate plants would have been wholly unproductive. He, however, speaks of no change taking place in the blossoms of the plants from rich cultivation or otherwise. We should presume that if such change had taken place, either with this variety or any other which he cultivated, "a sound practical gardener," as he was, would have noticed it.

Mr. DOWNING, in his treatise, states that the Prolific Hautbois always bear perfect flowers. In his magazine, he omits [accidentally, Ed.] to class it among his enumeration of those varieties having this character.

* We think our correspondent is in error here. We never knew an English gardener who did not look upon the whole matter as a chimera in practice; and a pretty large and constant correspondence abroad, and a close acquaintance with the gardening literature of Europe, enables us to say that it is no where generally resorted to in practice on the continent. The theory of the matter is acknowledged, but the practice of it is very rare.—Ed.

* Our readers will understand that our correspondent refers to our opinion as expressed in our work on Fruit Trees. It should be remembered at the same time, however, what our correspondent seems strangely to have overlooked, that our article on "the Strawberry Question," in the August number of the Horticulturist, was written expressly to state our own change of opinion regarding the practical value of the fertilizing plan. Horticulture is not yet a perfected but a progressive science, and we are in favor of progress.—Ed.

MR. PRINCE speaks of "some varieties of the Hautbois Strawberries being perfect in both organs, and producing very large fruit." Mr. LONGWORTH is confident that he is in an error. The La Grange, he supposes [rightly, Ed.] to be the same as the Musk or the Prolific, and he says he has "heard intelligent cultivators contend all the blossoms were perfect in both organs, and always bore full crops. Such is not the fact; but in some seasons a large portion of the blossoms are wholly barren, or bear small defective fruit, and would, to a casual observer, be supposed to be an abundant bearer." This difference of opinion has led us to examine farther into the written history of this class.*

JAMES WORTH of Pennsylvania, in a communication to the American Farmer, Vol. 5, p. 10. (1823,) says: "In some species, particularly the Hautbois, the barren and fruitful plants are separate," and should be apportioned. A correspondent of the same paper, Vol. 6, page 198, (1824,) says that "the Hautbois is the only strawberry I ever met with which has male and female plants; all others which I have seen are hermaphrodites," and speaks of the necessity of setting out a due proportion of male plants. A correspondent of the same paper, in a communication published in Vol. 7, p. 56, complains of the barrenness of this variety, and refers for instruction to the communication last mentioned, as coming from the best horticulturist in the state (Maryland.) A correspondent writing from the District of Columbia to the same paper, in a communication published in Vol. 7, page 60, says: "It is only in the Hautbois variety that any

difficulty is experienced on account of the sexual difference in the plants. It differs from the character (believed to be common to all other varieties) inasmuch as its female flower at least is an imperfect hermaphrodite, imperfect as to the male organs. On inspection, the filaments appear thicker and shorter than in the Scarlet and other strawberries, and the anthers are small and effete; and experience proves that the flowers are of themselves barren, or at least produce small and juiceless fruit. The germ is of the proper size, and is found, when properly impregnated, to be fruitful. In the male plant, the filaments are larger and more erect than in the common strawberry, and they have the anthers perfect and the germ smaller. This, too, is believed to be what botanists term an imperfect hermaphrodite, but predominates in the male organs as the others predominate in the female organs. In practice it is well known to the observing horticulturist, that there being of this plant but a small proportion of males to females, the beds will, if nature is left to herself, be in a great part barren."

These figures accompanied the communication, and we presume them to be correct.



Fig. 44. Staminate Flower. Fig. 45. Pistillate Flower.

[We give the figures, though scarcely to be recognized as strawberry blossoms.—Ed.] Both flowers had all the organs necessary to produce fruit, plainly developed, but each were imperfect. In the blossoms of every

* If the writer of this article were familiar with this class of Strawberries—the Hautbois—he would easily understand what, only reasoning from the writings of others, now puzzles him. Most of the Hautbois are strikingly defective in their blossoms, and have therefore been abandoned by many persons as difficult of cultivation. The Prolific Hautbois is an exception, and usually gives good crops—the blossoms being nearly perfect.—Ed.

variety of strawberries which we have examined, the organs of both sexes are always present, though in different degrees; yet in some instances, one or the other is so partially deficient in number and size, as to be imperceptible to the naked eye. The cuts accompanying the last number of the *Cultivator*, give a correct delineation of those organs when examined by a microscope, and plainly show how much they differ in length, size, and form, in distinct plants even of the same class. When raised from the seed, the plants have distinct and different organization. Some may be so far destitute of pistils as to be sterile, or have them in so imperfect a form as to possess but little fertilizing power. Others may have them in such a degree as occasionally to produce small and indifferent fruit; others may have a better proportion, but still not be uniformly productive; and others may be so far destitute of stamens, as to be wholly unproductive without the aid of staminate plants, and may be more or less productive, as the staminate plants used with them differ more or less in the development of their fertilizing qualities. We see no reason to doubt [the existence] of any variety of strawberries, since the proportion of both organs varies so much in different plants, that a plant may be produced having the organs equally well proportioned, and thus be perfect.* If it should not be selected and kept by itself, but cultivated with other seedlings raised with it, horticulturists would differ as to the character of the new variety from cultivating beds more or less fruitful, and having plants of a different organization.

* Here our correspondent is perfectly correct in his views. What are called male and female strawberry plants, or staminate and pistillate, are not so, strictly speaking, like those of real diœcious plants, such as the *Osage Orange* and the *Buffalo Berry*; but only apparently so, as we stated in our work on *Fruits*. The organs are always present in all strawberry blossoms; but in what appear to be pistillate blossoms the stamens are only rudimentary, or partially developed, and *vice versa*. Ed.

We examined blossoms of the *Hovey's Seedling* last spring, and whilst we found a large share of the blossoms undoubtedly pistillate, we also found a few differing from the pistillate form, yet not so much as to constitute what we should suppose to be perfect flowers.

Whether every variety was perfect in its normal state is one question, and whether a perfect plant changes is another; and what varieties are perfect, and what otherwise, is also another subject of inquiry.

That certain varieties have a tendency, when highly cultivated, to vary from their normal state, seems to us very improbable. Our wild species produce flowers both staminate and pistillate, whether springing up in rich or poor soil, whether growing upon the barren hill-side or the fertile meadow. When the seeds of strawberries are sown, plants are produced of each description. This fact is shown by the experiments of LINDLEY, and, we are confident, would be confirmed by the experience of every observing cultivator, who has had occasion to test it.

The condition of the soil has nothing to do with this natural difference of organization. Why high cultivation should not produce the same effect with every variety equally productive, according to their organic strength, we are at a loss to determine.* The *Large Early Scarlet*, for instance, which in the article in the *Horticulturist*, is

* We fear this is the reasoning of a special pleader, rather than that of a scientific investigator. Our correspondent, if he pursue his examinations further into the kingdom of nature, will "be at a loss to determine" the cause of many unexplained anomalies. The *Pear*, the *Apple*, and the *Quince*, are all nearly allied in structure—so much so as to be considered as belonging to one *genus*, by the older botanists. Why is it that three thousand years of cultivation, which has transformed the *crab* and the *choke-pear* into so many hundred delicious varieties, has not yet had the effect of making a single sort of quince a really *etable* fruit? Why is it that bog earth will cause the flowers of one species of *Hydrangea* to change to a fine blue, and not affect those of any other? The *Boston Nectarine* was raised from a peach stone; why does not every peach stone produce a nectarine?—Ed.

called perfect, is a regular, very abundant, and excellent bearer, as much so as any other scarlet. Why has not the same cause produced the same effect upon this as upon the other varieties of the same class? That over luxuriance should result in sterility, might be quite probable; but, according to Downing, far from any exhaustion of the productive powers taking place, "some varieties bear finer and more abundant crops than they did in their natural state;"* the vigor of the plants is unimpaired, and when a bed is formed by a proper selection of each, and cultivated in a rich soil, the plants have a stronger tendency to overbear, and therefore a stronger tendency to change from their condition, than when in their normal state.

In support of the opinion of a change in the organization of this fruit, can any analogous case be shown? If it be an anomaly, the proof to establish it should be clear and positive.†

* Mr. E. does not quote us quite fairly. In our article on the Strawberry Question, p. 86, we have stated distinctly that a variety having become pistillate, is so imperfect in one of its productive powers—the stamens—that it requires the aid of other plants to fertilize its blossoms. It is only when this defect is supplied most fully, by an artificial system of fertilizing the otherwise sterile blossoms, that it bears more abundantly than in the natural state.—Ed.

† There are many examples of this "change of organization" in other plants. The blossoms of the common Hydrangea, as we usually see them, are entirely sterile. There is not a trace of stamens or pistils. But when this plant is grown in very poor and dry soil, the small and perfect normal blossoms are produced, which have pistils and stamens in abundance. Last season, a very dry one, a large plant in our garden bore numerous clusters of perfect flowers.

On the lawn near our own house, stands a large and fine specimen of *Magnolia conspicua*. In China, its native country, it bears seed abundantly. Here, though perfectly hardy and flowering every year profusely, only two or three pistils in a capsule are fertilized, and swell into seeds. The rest are abortive. The Tulip Tree of our forests, for the first ten or fifteen years after commencing to bloom, bears false or hollow seeds. In the older trees, the fructifying powers assume a more complete form, and the seeds borne are all perfect. The cultivator of exotics is familiar with this change in plants introduced here from warmer climates; hence he fertilizes the blossoms of Camellias, Cacti, and numberless other genera, when he wishes to raise large and perfect seeds. Now the *Pine Straw-*

Mr. DOWNING gives us the result of his observations for the past two seasons, relative to his beds of the Ross' Phoenix and Hovey's Seedlings.

We would premise that he admits that the pistillate or staminate form once reached, is permanent. He says that "last season was the first that an isolated bed, in his garden, of Hovey's Seedling came into bearing. Being fully alive to the interest which this subject has assumed, we examined this bed daily when it was in blossom. As we have before stated, the blossoms were *all* perfect, large, well developed, and bearing a due proportion of stamens and pistils. With a careful search, we were only able to discover two plants that bore pistillate flowers. Every plant bore flowers and fruit. When the same plants came into bloom in May, we watched the opening of the blossoms with a great deal of interest. When the bed was fully in bloom, we discovered that *more than one-third* of the plants bore only pistillate blossoms. Of the remaining two-thirds, many bore perfect blossoms, as they had done previously, while a few also bore imperfect staminate blossoms;" and he predicts that next year, the bed will have changed almost entirely to pistillate plants; and he also states "the same result occurred in a bed of Ross' Phoenix, and that in another part of the garden

berries, (the class to which Hovey's Seedling belongs,) are originally from a warmer climate than our own, and their fructifying organs are liable to the same general laws of variation when introduced into a different climate.

The Dutch florists would give our correspondent a familiar proof of a change in the parts of plants. A grower of tulips raises a large bed of seedlings. When the bulbs first come into bloom, they show only plain or self-colored blossoms. But the florist does not despair; he calls these plain tulips his *breeders*. He cultivates them patiently, and by and by, perhaps in a year, perhaps in several years, the plain and uniformly colored flower breaks out into a new sort, of the greatest variety and brilliancy of color. This variety, having once attained a new and distinct character of blossom, does not fall back again into the normal form, but takes its place among the select variegated sorts.—Ed.

a bed of Hovey's Seedling, that has borne for *three years*, has become entirely pistillate." How did it happen that if perfect plants will entirely change in three years or less to pistillate and staminate forms, that he was so fortunate in 1844 or 1845 as to have beds entirely composed of such plants as these two varieties?

The Ross Phoenix was raised in 1837, and the Hovey's Seedling has been cultivated for twelve years. If it takes but three years only to change their organization, would it not be reasonable to presume that the perfect plants would have long since been entirely extinct? Those who cultivated these varieties, immediately after they were raised from the seed, we presume, cultivated them upon as "rich soil" as that upon which Mr. DOWNING planted his beds, and raised probably as large crops; why did not the perfect blossoms assume a different form under their management, before any plants reached his hands? Supposing even that some few perfect plants, by not having been "cultivated in rich soil," or not having been allowed to "overbear," still remained, it would be singular that there should be entire beds of them in 1844 or 1845. Whence were they obtained? Has Mr. DOWNING, or any other person, for years cultivated these varieties upon poor soil, to prevent the perfect plants from running out?

L. C. E.

Providence, August 20, 1846.

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ADDITIONAL NOTE BY THE EDITOR.—We think we can very readily throw some light on this latter point, which seems so difficult of solution to our friend.

In the first place, we may repeat that when once the normal state of a strawberry is that of perfect blossoms, as we consider Hovey's Seedling to have been, it requires that the plants should bear two to four years

upon the same bed before the offsets would also assume a pistillate form. Now, every one knows that a new variety of strawberry as popular as this has been, is not one which is likely to be allowed by gardeners and nurserymen to remain long in the same bed. On the contrary, the demand for Hovey's Seedling has scarcely been supplied by continually taking off the runners, and making new plantations, as fast as they were formed. It is evident, therefore, supposing a bed to bear perfect flowers the first season, that, according to our views, if a new bed were formed with the runners of that summer, and again another fresh plantation made from the off-sets of those runners the succeeding year, that the original perfect condition could be and is preserved. In short we believe as we before said, a strawberry, which is at first productive and perfect in its blossoms, may, by renewing it by fresh plantation, made from off-sets taken from beds that have borne but once, be preserved forever in a perfect state.

Hovey's Seedling is now in this condition in many hands. But in the majority of cases, in private gardens, having been allowed to bear continuous crops, it has assumed permanently the pistillate form, and now requires to be fertilized by other sorts.

The reason why we now recommend the plan of making beds of pistillate and staminate plants, instead of the perfect ones, as we did in our work on fruits, are these:

First, Because, for reasons stated in our article in the August number, we are satisfied that a bed of pistillates, fertilized by staminates, will be more permanently and uniformly productive.

Second, and *chiefly*, Because it requires more care and attention to renew a strawberry plantation every second year than the majority of our cultivators are willing to bestow. A fine crop this year, is the strong-

est temptation to leave the same bed till the next season. The bed originally bearing perfect blossoms, thus becomes barren by the mere exhaustion caused by overbearing, while in the other case, it can only become barren when the plants are absolutely in want of proper nourishment from the soil. Hence what we call Mr. LONGWORTH's mode, requires the least care and attention, and gives the largest and most certain crops.

One word more. The only *important* point of the "Strawberry Question" seems to be pretty thoroughly settled now—that is, the advantage of fertilizing the *pistillate* varieties. We scarcely know an intelligent cultivator in the country, who has given the subject careful attention, that is not now convinced of its value.

The other point—that of the *variation* of certain sorts from a perfect to a pistillate form, is one of comparatively little value,

in a practical point of view. There are several horticulturists, and among others, Mr. LONGWORTH, who differ from us regarding this.

It is idle to attempt to settle such a matter by argument. Nothing, when facts are required, will convince those who have not seen, but the facts themselves.

We therefore propose to send to the Massachusetts Horticultural Society, next season, a few pots containing plants of Hovey's Seedling in bloom. Those who oppose the theory of *variation* say that this variety now is, and always has been, a *pistillate* sort. We propose to show it to them in a perfect form—that is to say, *with an abundance of stamens and pistils*. If we do so, (and this the Society's committee shall decide,) then we shall consider the theory of variation established. If not, then we will admit that it falls to the ground.—ED.

REMARKS ON THREE STANDARD FRUITS.

OUR readers are already aware that while it is our desire to make this journal the vehicle of information respecting every thing that is *new*, and really valuable, among fruits and flowering plants, it is still more strongly our wish to extend as much as possible the knowledge of such varieties as have been tested here, and really proved to be *standard* sorts, rather than such as are yet perhaps only to be classed among the speculations of dealers in trees and plants. We shall therefore continue, from time to time, our remarks on this subject, commenced in the July number.

I. HULING'S SUPERB PLUM.

It is remarkable how little this fine plum is known. It is not enumerated in the Cata-

logue of the Horticultural Society of London; and it exists only in a few collections in this country. Still it is at least twenty years since it originated, and the first description of the fruit given by the elder PRINCE, in his "Short Treatise on Horticulture," was published in 1828. It was stated truly, in that work, that "it is larger than the Washington," and it was considered at that time to hold "the first in rank among plums."

One of the members of the fruit committee of the Boston Horticultural Society remarked to us, a year ago, that Huling's Superb could not really be a fruit of merit, else why should it even now be so little known in the country?

The truth is, for a long time this variety

was almost lost, and existed in many collections merely by name. Eight or ten years ago, we succeeded in obtaining a tree of it in Philadelphia, after a long search in gardens elsewhere. We fruited it, satisfied ourselves of its high merit, and have since had the pleasure of distributing many trees of this variety.

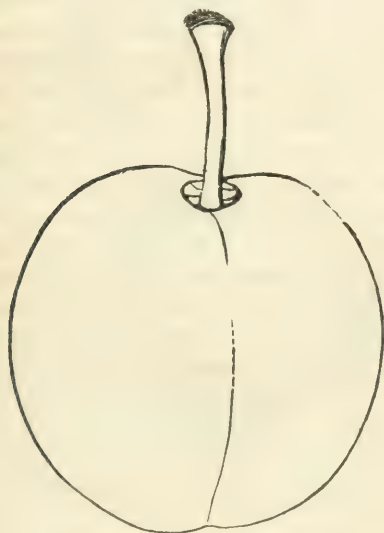


Fig. 46. *Huling's Superb Plum.*

Huling's Superb is one of the most striking and remarkable plums. When fully grown, it is of the largest size, measuring six inches in circumference. The tree is very distinct and remarkable in its growth—the leaves being very broad and large, and the shoots peculiarly stout and blunt, and with a large *shoulder* (or swelling) behind each bud. The growth is thrifty, and the young branches downy.

The description in our work on fruit trees not being complete of this variety, we here subjoin another, drawn up with the fruit before us.*

Fruit very large, roundish oval, with a distinct though shallow suture. Stalk strong and stout, about an inch long, swollen at its junction with the tree; set in a round small cavity. Skin rather dull greenish-yellow, thinly covered with pale bloom. Flesh greenish-yellow not very fine grained, but with a rich, brisk, sprightly flavor, less sweet, but higher flavored than the Washington: it adheres to the stone. It ripens at the middle of August, and is an excellent bearer.

Huling's Superb is not equal in flavor to the *Jefferson*, (which has this season again fully sustained its high character with us); but it is altogether a noble fruit, and we commend it especially to every grower of the plum who has the good strong soil which this fruit tree delights in.

II. THE BLACK PRINCE STRAWBERRY

This remarkably excellent variety has been before noticed by us, and we now give a portrait of the fruit as grown here the past season. The Black Prince Strawberry is not a new variety in England, though it is yet very little known in America. It was described in the Horticultural Transactions and in Lindley's "Guide to the Orchard," fifteen or more years ago, as a "very dark violet fruit, with a solid flesh, rich and high flavored." It is not now ranked as first rate in the London Society's Catalogue; but this may perhaps arise from its not thriving well in the neighborhood of London. Keene's Seedling, which is still, almost unanimous-

Fruit Trees of America. The Huling's Superb Plum is a *cling-stone*. We had a fine crop of this fruit three or four years before we prepared that work, but since that time we found our notes were not complete respecting this fruit. Both the Prince's described it, but were silent on this head. We endeavored to obtain some specimens in the summer of 1844 without success, and wrote to three cultivators who had grown it, but they could not settle the point. We therefore stated, on our remembrance, that it was a *freestone*. *Pomona* forgive us! It shall be corrected in our next—the seventh—edition.

* It is quite delightful to correct *ourselves* one of the errors, which the ardent pomologists of the new school have not yet been able, with all their industry, to detect in our *Fruits* and

Fig. 47. *The Black Prince Strawberry.*

ly placed at the head of strawberries in England, would have but a small vote in its favor for general cultivation by horticulturists in the United States. Our climate, which is quite unsuited to it, is perfectly congenial to other varieties, and the present among them.

The Black Prince Strawberry we received from England about five years ago. Since that time it has been grown in our gardens, under the most indifferent, as well as under the best culture—on common soil, and on soil well prepared by trenching. It has been left fully exposed at all seasons, and in unsheltered places; and we, therefore, feel warranted in saying, that for hardiness, abundant product, and especially high-fla-

vored fruit, it is not surpassed by any variety that has been tested in this country. In winters, when nearly all the large *Pine* strawberries, left uncovered, have been more or less injured, this has not suffered in the least.

The blossoms of the Black Prince are all distinctly *pistillate*. When planted near a bed of Early Scarlet, Duke of Kent, or Early Virginia, (sorts with an abundance of *stamens*,) every blossom, therefore, sets, and becomes a large and finely formed fruit. In regular and abundant crops, it surpasses every large-fruited variety that we have seen.

In high *flavor*, we consider the Black Prince as standing *unrivalled* in this climate. We speak now chiefly of its quality as

grown in this state. It has not yet been sufficiently tested in the East and West to enable us to speak positively of its merits there; but its exceedingly hardy character affords us the best reason for believing it will prove equally so in those sections of our country.

The *leaf* of this variety of strawberry is large, symmetrically formed; smooth, rather flat and handsome; the color dark, but not glossy on the upper surface. The *fruit* is always large, but scarcely of the largest size; always very regularly formed, ovate, depressed. The color is a deep purplish-red, much *darker* than that of any other Pine strawberry, and the surface of the fruit is very *glossy* or polished, with the seeds slightly imbedded. The flesh is solid, firm, dark red, and unusually rich and high flavored. The footstalks of the leaves are quite downy. It ripens about the medium season.

III. THE TRUE RED ANTWERP RASPBERRY.

We are induced to give an engraving of this most excellent standard sort, because even now the genuine Dutch variety is yet comparatively little known, except around Boston and New-York. Four or five cultivators of fruits, having good collections, have sent us, lately, specimens of the small

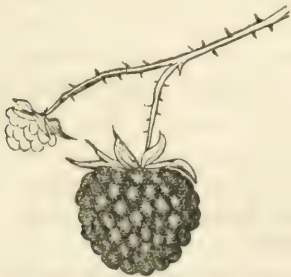


Fig. 49. *The Spurious Red Antwerp.*

and indifferent berry so generally known by this name, asking us to say if such were

the true Red Antwerp? It is a small and very inferior fruit, fig. 48, entirely unworthy of cultivation.

The true Red Antwerp is correctly shown in the accompanying illustration, fig. 49. It is every way a fruit of the highest merit, very large, a regular and abundant bearer, of high flavor, and will not, we think, be displaced from our gardens by any new sort. Its fruit is very regularly conical, rather longer and more regularly shaped than that of any other sort.

An opinion of a new fruit cannot be said to be fixed, till it is based upon trials made in various parts of the country. Since the publication of our account of the Fastolff Raspberry, we have received the following note from a highly respectable fruit-grower, near New-York, who raises the raspberry extensively for market. The writer is one whose opinion is one of weight, and his remarks are to the point at the present moment.

"I have read your article on the new English raspberry—the Fastolff. I raise the raspberry largely for market, and having about one hundred good sets of the Fastolff in full bearing, can give an opinion with probably as much confidence as any body else in this country.

"The Fastolff is a very fine fruit, and merits all you say of it. But I do not think it, at least for my purposes, equal on the whole to the real old Red Antwerp, which I have long grown a great quantity of. The Fastolff is not much, if at all larger than the Antwerp, *with the same cultivation*;* it is not richer to the taste; and it has for the market grower the defect of being a *soft* fruit. In other words, it will not bear carriage well. The real Red Antwerp is not injured by being picked or carried to mar-

* You know how a new sort of fruit is always nursed and stimulated into large size.



Fig. 49. *The True Red Antwerp Raspberry.**

ket. It cannot be beaten for product, and I am sure will, *in the long run*, be considered the more worthy of cultivation of the two sorts."

The foregoing opinion is doubtless based upon the truth. The Fastloff, though a splendid fruit, will not bear carriage well.

We think, however, that it is a somewhat larger fruit, and it appears, so far as we have tried it, rather the hardier of the two, but this is not yet fully established. At any rate, there are no *two* varieties of the smaller fruits better worth a place in the garden than these.

A Successful Mode of Transplanting Trees in Summer.

BY S. G. PERKINS, BOSTON.

[To THE following article, from the pen of S. G. PERKINS, Esq., we ask the attention

of our readers, as one of unusual novelty and interest.

* Our figure, in the July number, of the Fastloff Raspberry, was very badly executed. In outline it shows the genuine fruit correctly, as it appears in common garden culture; but the engraver failed in the cut as a *portrait* of the fruit.

Mr. PERKINS, as our readers are already aware, we esteem as a veteran horticulturist, whose practice is not surpassed by that

of any other person in the country. Last season, when we examined his interesting garden, near Boston, we were particularly struck by the trees alluded to in this article. Some of them had been transplanted in full leaf the same season; others the previous summer; yet, to our astonishment, they had as luxuriant, and almost as fruitful an appearance as if they had never been disturbed.

Our readers will be struck with the *apparent simplicity* of Mr. PERKINS' process. We may remark, however, that it is the simplicity of profound knowledge. Novices, therefore, ought to be told that it is supposed by so skilful a practical man as our correspondent, that the *transplanter* who undertakes to follow his mode, is a man who knows his business, and has the same respect for *fibrous roots*, that a pious monk of the fifteenth century had for a fragment of the true cross.

We have never heard of any success on the other side of the Atlantic in transplanting trees in full growth. Notwithstanding this, and the fact that our climate is by no means a very favorable one for transplanting, Mr. PERKINS' success, by this—his own mode, is complete and satisfactory. Though it may not be of such general utility, as to take the place of spring and autumn planting, yet there are numerous instances where it will be of great value.—Ed.]

.....

DEAR SIR—In the spring of 1844, I intended to remove a small pear tree from my private nursery to one of the quarters in my garden; but being too much out of health to attend to my garden, I forgot or neglected to have it done.

The latter part of May, when the trees were in full leaf, I was passing through my grounds, and casting my eye on the tree in question, it brought to mind my omission,

and that I had lost a year in filling up the spot in the quarter where I intended to plant it. The tree was very vigorous, about four and a half or five feet high, grafted on a quince stock, and of a kind of which I had no duplicate; and I was, therefore, desirous of giving it a better situation than the one it occupied. While thinking of my blunder, it occurred to me that the tree might be removed then, in full leaf, if proper care was used in preparing it beforehand. I accordingly called my man "Patrick," and directed him to cut a trench round the tree as deep as its roots went into the ground, and about three or four inches wide. This being done, I had the trench filled with water, and covered over to prevent the earth from getting into it. In this state the tree was left between thirty and forty hours, when the ball of earth round its roots was found to be very firm and solid, so that the tree could be removed with perfect security; and it was actually done with perfect success, so much so that the tree never stopped growing, and made considerable wood during the summer. I soon after, about June 1st, removed several other pear, peach, and apricot trees with the most complete success.

Encouraged by this success, I removed on the 18th of June, 1844, ten trees to a trellis that I had recently made, viz., four plums, four peaches, and two apricots, all of which grew rapidly that year, and so filled the trellis, that I was obliged to take the peaches away this summer, 1845, in the early part of August, and place them on another trellis which I had built.

I continued, during the summer of 1844, to remove trees in full leaf, and some with *the fruit on them*, until the middle of September, and out of seventy-six trees removed I lost only six—seventy having succeeded perfectly. One tree that was removed contrary to my advice, after having been pre-

pared only twenty-four hours, lost the earth in part from its roots, and after lingering some time died. The reason of this was, that time was not given for the superabundant water to be discharged from the ball, and it of course was not as firmly consolidated as it would have been, had it been left six or eight hours longer, before it was taken up. My gardener now became a convert to my system, and had what he calls a "turban" made to tie round the ball before it is removed. This has been very serviceable, for with the aid of this cloth, we can remove balls so large, that they require three strong men to lift them. This year, 1845, I have removed, during the summer, many fine trees with the fruit on them, with perfect success; some of them were peaches, trained trees, five and six feet high, and spreading six and eight feet on the trellis.

The advantage of removing young trees in summer, when they are growing vigorously, over that of removing them in the spring or autumn, is as follows :

If you remove in the spring or autumn, you must either uncover the roots, or you must remove them with a ball of earth. If you uncover the roots, you put the tree back a year; but you have the advantage of seeing and cutting out all the bad roots; if you do not uncover the roots to examine them, you are liable to have your tree fall off and die during the summer, from the defective state of its roots. But if you remove the tree in the summer, at any time from the last of May to September, when it is growing vigorously, you may be sure that the roots are good, and the tree will never cease growing, if the precautions here mentioned are observed in its preparation.

Hence, I find trees removed this summer, 1845, with the fruit attached to them, have gone on to complete the growth commenced

before removal, and to increase the size and mature the fruit as if they had not been transplanted; and these trees will, I have no doubt, bear a full crop of fruit next year, if they are permitted to do so. Whereas, if the trees had been removed in the spring, and the roots stripped or laid bare, they could not have been permitted to bear at all this year, and but little fruit the next, without injury to the trees. Peaches, plums, and pears on quince stocks, bear transplanting in this way in the summer, without stopping their growth, provided they are vigorous thrifty growing trees at the time they are taken up.

When standard trees are transplanted in the fall or autumn, it is best to support



Fig. 50. Conical mound to support a transplanted tree.

them with a cone of earth, about twelve or eighteen inches high, according to the size of the tree. (See fig. 50.) This mode is far preferable to *staking*, as it supports them in an upright position without chafing the tree, as a stake is apt to do; besides the earth covers and protects the newly planted roots from the effects of the winter's frost, which will heave them, if the ground be moist, unless they are well *mulched* or covered with litter.

Standard trees, when transplanted in the autumn in the ordinary way, will be found

in the spring perfectly upright, if treated in this manner, and the earth may be then levelled, and the tree will remain firm in its position.

* * * * *

The foregoing is an extract from my memoranda of practice, and was written last autumn. I have only to add now that my anticipations regarding the success of the trees referred to have been entirely realized. They are as fruitful and luxuriant as I could desire. I will remark also, in addi-

tion, that I have found the best mode of *watering* the trees after removal, is to leave a narrow trench open, outside of the extremity of the roots, (after the tree is planted;) which being poured full of water, and left twenty-four hours before being filled with earth, will greatly promote the growth of the newly transplanted tree, without disturbing the ball which surrounds the roots. Respectfully,

S. G. PERKINS,

Brookline, near Boston, Sept. 2, 1846.

Climbing and Pole Roses for Hardy Culture.*

BY ROSA, OF PHILADELPHIA.

BEAUTY, or QUEEN OF THE PRAIRIES, is unquestionably as yet the best of the Prairie family; in rich mellow soil, it will grow twenty feet in a season, and is admirably adapted for either a column, pillar, or arbor. Its perfectly cupped, rosy-lilac flowers are produced in clusters; the petals have frequently a stripe of white, and bear the hot sun without injury.

PURPLE or PERPETUAL PRAIRIE, if highly cultivated, will frequently produce a succession of flowers. In color, it is a few shades darker than the former; the flowers are not so large, neither so well cupped, though perfectly double.

MADAM LAFFAY, *hybrid perpetual*. Blooming three or four times in the season, of a bright rosy-red color; large, perfectly formed; fragrant; with its large, rich, luxuriant foliage, is peculiarly attractive. I have a pillar of it six feet high, and even when out of bloom its dark shining green is very agreeable.

CERISSETTE, *hybrid China*. Bright red; very double; neat form; grows freely; flow-

ers very profusely, and though blooming only once in the season, is very attractive in any collection.

FULGENS, *hybrid China*, inclines to a bright scarlet, with a tinge of carmine color; perfect cupped form; medium size; fragrant; of rather slender growth, unless under very stimulating culture, when it makes strong wood that produces an abundance of bloom, but if severely pruned, will not show a flower.

GLOIRE DE ROSEMENE, *Bourbon*, I notice for its profusion and continual succession of bloom, of nearly a bright scarlet color; though only half double, yet on the lawn, pleasure ground, or in the distance, it forms a brilliant object; grows freely.

BEENNUS, *hybrid China*. This old favorite is not so extensively known as it deserves. Its bright scarlet-crimson flowers, exceedingly double; in size, the superlative degree; grows luxuriantly; continues a considerable time in bloom, and whether in bud, or full blown, is always perfect.

BOURSAULT ELEGANS, or AMADIS, generally the first flower of the season; its very long flexile shoots adapt it admirably for an

* Continued from page 30.

arbor, or to cover any disagreeable object ; when in bloom, it is one mass of shaded crimson-purple ; very hardy, growing in any situation.

RUSSELLIANA, or COTTAGE ROSE, is another luxuriant growing rose, and will form a pyramid from the base to the summit of great beauty ; the colors are scarlet, rich crimson and purple ; the flowers are double, and produced in large clusters. It also makes a good stock for budding other varieties upon.

PRINCE ALBERT, *hybrid perpetual*. A celebrated rose of perfect form, large and fragrant, of a purple or rich crimson color, according to the season ; a constant bloomer in rich soil ; grows luxuriantly, quite hardy ; makes a fine pillar of six or eight feet, and indispensable in the smallest collection.

RIVERS' GEORGE THE FOURTH, *hybrid China*. Every person, pardon me, every lover of roses, has heard of George the Fourth. With few equals, and none to surpass it of its color, it grows freely with me, though I presume it will be rather tender in a more northern latitude. The flowers are full four inches in diameter, of a very rich crimson color ; in profusion ; makes an elegant pillar of about ten feet high.

VANDAEL, *hybrid China*, in size and form is similar to the Brennus ; of a rich, shaded violet-crimson color ; quite fragrant ; grows luxuriantly ; greatly admired.

VIOLET DE BELGIQUE is also a hybrid China, of a *coquettish* character, being some seasons of a crimson-violet color, while in others of a rich bluish-violet (approaching to what has been often said to exist, a blue rose—a color that we never expect to see in the family ;) flowers of medium size, very

perfect, fragrant and quite desirable ; with a little stretch of the imagination may be called a *blue rose*.

BELLE THERESA, *hybrid China*. The darkest of Roses, but to show its color requires to be kept from the sun. The flowers are under medium size, produced in profuse clusters of rich dark purple-crimson ; a rampant grower.

KING OF HYBRIDS, or SAUNDER PANACHE, is as yet the only striped rose of this pillar-forming family ; perfectly double, cup formed, of a bright rose color, distinctly and invariably striped or spotted with blush-white ; grows freely, but if pruned severely will not produce a blossom. It will, I doubt, be too tender for very cold latitudes, though perfectly hardy here.

The above are descriptions from nature, feebly given I admit, though accurate in the whole. *Pruning* is of vast importance in procuring a profuse bloom—even many practical men show very little knowledge in pruning the different classes of the Rose. The shoots of those now described may at any time be thinned out, where too thickly crowded together. Any time from November to March, (or farther north, in March or April,) give them a general pruning by cutting back about one-third off the extremity of the shoots. The tender sorts are greatly benefitted by a slight protection of spruce, cedar or fir branches. Good cultivators always cover the roots with leaves, manure, or any convenient litter during winter, and enrich the ground every spring with thoroughly decomposed manure or leaf-mould from the woods.

ROSA.

PRESERVATION OF APPLES.—The use of dry sand was recommended by the late Noah Webster, as excellent for preserving apples through the winter. When packed in it the flavor is not lost, and all mustiness arising from evaporation of moisture prevented

ON THE USE AND ABUSE OF GUANO.

BY THE VICE-PRESIDENT OF THE BUFFALO HORTICULTURAL SOCIETY

MUCH as has been said and written, *pro* and *con*, as to the merits of guano as a fertilizer, still, as an amateur florist, I would beg your permission to add my experience to the list. I would ask leave, at the outset, to say a few words of censure to very many professional florists, whom I have met and conversed with on this subject; and who were deeply prejudiced against its use. One says, "I have used guano, and it has burned up my plants." Another: "It has not met my expectations, and therefore I find it useless." The most patriotic objector is a writer in the *Agriculturist*, who exclaims, "'Tis a national sin to be importing foreign fertilizers," &c., &c. Upon inquiring as to their mode of application, the sequel is soon told! Some have used it in a crude state, merely intermixing a quantity with the surface soil in the pot, as a top-dressing; another has sprinkled the surface only, and left its essential volatile parts to evaporate. Others mixed it with water till it reached the color of *Brown Stout*, and kept the soil saturated, and even, in some cases, syringed the plants with it. And others, again, adopted the principle, that if little was good, much must be better. And thus it is, that one of the greatest aids to the green-house and conservatory, has been anathematized and condemned, from ignorance and misapplication, by the very individuals that should, and would, under proper management, be highly benefitted by it.

And while here I might stop to lament the fact, that so few of our florists and gardeners are sufficiently educated and liberal to draw conclusions, and judge aright any innovation in the routine of their labors, which the skill and genius of the few may

produce for their benefit. Many of them are good practical *mechanical* men; they can mix a compost according to the old receipt, and grow tolerably well the plant, but physiologically and theoretically know but little of either plant or compost. A professional florist showed me the other day, a pot sowed with tender and valuable seed, which was placed immediately under the glass in order to get *light*, that it might assist and ensure its germination! not recognizing nature's forcible lesson of fallen leaves, &c., to hide and *shade* the seed from light, which would retard those chemical changes so necessary to stimulate its vital powers into action. Another was sorry that he had dabbled with books; he would not give a fig for all the periodicals in the country to assist him; he cultivated better before he began to read, than he has since; and dates his bad luck from the period when he began to read books and use guano! These then are the opposers of guano, and I assure you the illustrations are not over-wrought pictures, but emanating from men who have extensive ranges of both *glass* and grounds. They seem to adhere rigidly to the old maxim, "*This is the field my father grew his barley in, that his oats; I do so likewise.*"

My experiments prove satisfactorily to me, that if a plant is in a proper medium to grow, that is, sufficient light and heat, with a light loamy soil for its roots to work in, the judicious application of guano will make it perform miracles, compared to any other fertilizer that can be applied to it. It seems to give new energy to every part; the vital forces of the plant are directly acted upon; the obscure axillary buds, that have lain dormant, now burst, and the plant puts

on its utmost luxuriousness of dark green foliage.

I have noticed a fact which strongly proves the power of guano in inducing a vigorous flow of sap. Many of my Geraniums, that had lain dormant for months, upon being stimulated with guano, threw out adventitious buds, clusters of leaf, stem, flower buds, &c., all in a hard knotted ball, varying in size from that of a pea to a common marble, greatly to the surprise of those persons who had never before seen such specimens.

A *Calla ethiopica*, in an eight quart pot, by being grown in a damp, warm place, and watered regularly with guano water, twice per week, (using in the water the full of a teaspoon of the guano each time,) threw up a continuous growth of flowers and leaves six feet in height. The leaves were often compared to those of the mammoth Rhubarb, and the flowers were certainly twice, if not three times, the usual size. This plant was not out of bloom from February to August, and was exhibited before the Buffalo Horticultural Society each month. With these plants I have experimented with all the various liquid manures, but with none so successfully as the guano.

An *Amyryllis johnsoni*, by a similar treatment, bloomed magnificently. It threw up ten flowers on a couple of stems, two feet four inches high, and an inch and a quarter thick, covered with a beautiful bloom; this was in February. After blooming, it was laid aside for the season, but in July, it burst again, and had six flowers on one stem, larger and finer colored than the first. This stem ran up with great rapidity, growing more than an inch per day. It is now going out of bloom, and maturing its seed, which I intend shall be well taken care of. The reason, probably, why this bloomed so early in the season, was that my green-house was

kept at a temperature of sixty degrees in order to forward grapes.

Geraniums are particularly fond of guano, or the guano is fond of the *Geraniums*. I never had so fine a bloom from any other means. The plants grew remarkably thrifty, made fine shoots, and the flowers were unusually large, as compared with others of similar kinds. Very many had seven petals instead of five, and the colors were clear, rich, lustrous, and well defined.

Roses cap the climax, with guano culture, and, as a juvenile amateur in my garden frequently observed, "they really hop." A small cutting of the *Boursault grandiflora*, which I carried home last summer between my teeth, I carefully nursed into a good growth during the season. This spring it shot up astonishingly, putting forth up to this time six canes of vigorous growth, some six to eight feet high, besides a considerable number of fine blossoms. It is now growing completely rampant. A *Chromatella* and a *Solfaterre*, which I purchased in New-York in May last, so small that I carried them both in my pocket wrapt in a bit of moss, have done equally well. (I pot my *Roses* in a mixture of sandy loam, with one fourth fine charcoal, and about the same quantity of decayed wood from old stumps.) These *Roses* have made great growth, and the guano was soon felt. The *Solfaterre* has a shoot which measures over six feet, with as splendid a leaf in size and lustre as ever graced a thorn-covered branch. The *Chromatella* has put forth more shoots, and being different in habit, it is more bushy, but remarkably thrifty.

I have also experimented upon some seventy or eighty other *Roses*, and universally find that a judicious application of guano is the *sine qua non* in *Rose* culture. Another fact worth noticing is, that the Red Spider, *Acarus telarius*, which has before

greatly troubled me, has not shown itself in the guano culture, most probably from the strong, healthy, and quick growth of the plants.

I might continue to enumerate other plants as being equally benefitted by this fertilizer. The *Cactus*, the *Grape*, (I have twenty varieties,) the *Camellia*, *Oleander*, *Passiflora*, *Abutilon* (seven feet high, in full bloom, one year old,) *Tree Paeonies*, *Fuchsias*, &c., &c. Indeed, there are no green-house plants in my collection, which do not appear to show conclusively the marked advantage derived from this fertilizer. It is so easy in appliance, so portable and so cleanly, and withal so cheap, as to be within the means of all cultivating plants; containing within itself the constituent aliment necessary for the growth of stem, flower, fruit and seed, it does indeed come nearer to an universal compost than any other known.

It is, then, for the purpose of making more generally known the virtues of this fertilizer, and that the many amateur florists like myself, may be put in possession of these facts that I now trouble you. It has been usual with me to keep a hogshead in the stable for *liquid manure*, which has been used against and compared with guano in my experiments, but that is now abolished.

My method of using and applying the guano is this: To a barrel of good light yellow loam, intermix thoroughly half a bushel of well broken charcoal, and half a

peck of good Peruvian guano. These should be well worked together, dry, but much as a man would temper mortar, rendering all fine and free from lumps of the guano, and kept in a box or barrel covered up from the weather. It is fit for use immediately, but is better by standing a few weeks. In applying it, I use a trowel full or more, according to the size of the plant, pot, &c. In potting anew, use one third compost to the amount of soil required, well intermixed. When used in a liquid form, it is better to mix for some days before using, bearing in mind to so keep it, that it shall not evaporate its volatile parts. A heaped table spoonful of the guano to a gallon of fresh rain water, are the proportions; this again can be diluted for young plants, and it is *decidedly better to begin its use gradually*. Broken charcoal is a vastly better drainage for pot culture than any thing else, as it will absorb and fix the ammonia, and the roots and spongioles will delight to revel and entwine amongst it.

In conclusion, be careful in applying this stimulant that your plant is in a *growing state*, avoiding this strong mixture while dormant, but when it has taken a start, follow it up, attentively watching it, reducing or adding as the effects will readily show. A plant in full growth will take a liberal supply, and be highly benefitted by it, while the same quantity would kill two similar plants in the dormant state. W. R. COPPOCK.

Buffalo, Aug. 15, 1846.

Description of two new Raspberries.

BY DR. W. D. BRINKLÉ, PHILADELPHIA.

1. THE CUSHING RASPBERRY.

THIS new Raspberry I named the *Cushing*, in honor of J. P. CUSHING, Esq., of Boston. It originated from a seed of a berry of the

new Double Bearing, imported by Mr. ROBERT BUIST of this city. The seed was planted June 27th, 1843, and vegetated in the spring of 1844. It fruited for the first

time in the autumn of 1845. Only one berry, however, matured at that time, in consequence of the accession of cold weather. It fruited again this summer—the fruit beginning to ripen June 12. *Fruit* large, roundish-conical, crimson, and of fine flavor. *Leaf* very much plaited, and very regular in form. The stool has sent up three shoots this season, one of which is at this time five feet high. The Cushing Raspberry is extraordinarily productive. The prickles are brown.

II. THE ORANGE RASPBERRY.

This Raspberry originated from a seed of a berry of Dyack's Seedling, imported by Mr. BUIST. The seed was planted July 13th, 1843, and vegetated in the spring of 1844. During the winter of 1844 and '45, it was kept in a pot in a room without fire, with a southern exposure. Early in the spring of 1845, it blossomed and was set in the yard rather too soon; some of the berries, however, matured. In the course of the summer it was taken out of the pot, and planted on the west side of a board fence. It fruited again this season; the fruit commenced ripening July 8th, nearly a month

later than the Cushing, within one foot of which it grew. Whether or not this lateness of ripening was owing to any accidental cause, I am unable to say; next season will determine this question.

Fruit as large or larger than the Yellow Antwerp, ovate, of a beautiful orange color, and excellent flavor. *Leaf* very irregular in form, scarcely two precisely alike; generally not so pointed as the Cushing, but broader. It has sent up five vigorous shoots, one of which is now seven feet high. It has white prickles.

The fruit of Dyack's Seedling, the parent of the Orange, is of a deep crimson color.

W. D. BRINKLE.

Philadelphia, Aug 3d, 1846.

[Dr. BRINKLE has, as we learn from many persons who have seen them, been remarkably successful in originating new varieties of Strawberries and Raspberries, to which he has devoted much attention for some years past. The foregoing are accurate descriptions of what, we believe, will be found acquisitions to this class of fruits. We trust they will soon be offered to amateurs.—ED]

THE NEW FRUIT GATHERER.

HAVE our readers never contemplated with a feeling of delight, a fruit tree, in the full youthful perfection of its foliage and fruit; its thousands of leaves, young and tender, trembling and fluttering in the slightest breeze; its smooth and tender bark, welcoming gladly the serene air; and its ruddy or golden treasures, half hidden among the verdure, glowing in the mingled morning dew and sunshine, like large crystals of ruby or topaz?

Possibly they have never beheld the mat-

ter in so poetical a light. If not, let us turn it about, and look upon it in a more economical one.

Suppose one wishes to gather these tempting fruits, which we will call simply good "gages" and "pippins." If one climbs the tree, the most natural way, one can only reach that little neighborhood of branches, which have strength and substance enough to bear the absolute weight of a man. If one mounts a ladder, only such additional points can be gained as are

strong enough to bear the sway of half the weight of the man and ladder together. Far—far beyond the reach of the longest arm, hang ripe, ruddy, tempting specimens which are larger, fairer, sweeter, than any that have yet fallen into our basket, well laden though it may be.

This is not the proper conduct of a *domesticated* fruit tree, as we are told by the botanists all our orchard trees are. To bear its finest specimens so provokingly out of

reach, that their rightful owner cannot possibly gather them! What can be the meaning of it? Is this a wild and untamed trait, which is not yet rooted out of our most *thorough-bred* and civilized varieties?

To be serious, there is a positive inconvenience, that is felt by all cultivators of fine fruit—we mean the difficulty of gathering it from many parts of the tree; which because they are the thriftiest parts, always furnish the best samples.



Fig. 51. The New Fruit Gatherer in operation.

Various kinds of *fruit-pickers*, little instruments affixed to poles, have been invented long ago, by which to overcome this inconvenience. But they never quite supplied the want. They were always trou-

blesome and tedious in practice, and consequently they have never come into general use.

A few weeks ago, there was put into our hands an exceedingly neat and efficient little

machine, which, after a fair trial, we cannot but think quite a prize to all amateurs of fruit. It is the **PATENT FRUIT GATHERER**, invented and brought into use this season by **MESSRS. SEDGWICK AND BROOKS**, of Poughkeepsie, N. Y.

The instrument is at once simple, highly ingenious, and well adapted to the end in view. It consists of a set of converging springs made of strong brass wire, at the extremity of which is a sliding open wire circle. To this circle or loop, is affixed a long hose of common glazed cotton. The whole apparatus is shown in the accompanying sketch, Fig. 51.

The apparatus is affixed to the end of a strong reed pole, such as is commonly used in fishing. This enables the operator to reach specimens on the most distant branches of a fruit tree. Holding the pole in one hand, and directing the end

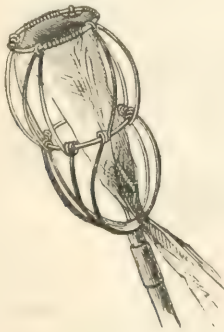


Fig. 52. *The Fruit Gatherer open.*

of the instrument to the fruit, the circular mouth receives it, and with a slight pull of the other hand on the *hose*, the springs close as in fig. 52, the fruit separates from the branch, and slides gently down the hose into the basket. If it is a heavy specimen, like a Beurré Diel pear, or a Gloria Mundi apple, that hand of the operator which is upon the hose may give it a slight check to break its fall as it passes down.

The whole length of the pole is about eighteen or twenty feet. This would be unnecessarily long for many trees. A joint is therefore made at half length, by which



Fig. 53. *The Fruit Gatherer closed.*

it is easily separated into two parts, and half, or the whole length used. An ingenious *ring-loop*, in the *hose*, enables one, in a moment, to separate it also in two parts, corresponding to the length of the pole, or as quickly unite the whole again.

The great advantage which this new fruit-gatherer has over the old ones, consists in the *hose*. This conveys the fruit to the basket as fast as one person can pick it. In the old instruments, the hose was only a small bag or net at the end of the pole, so that thrice as much time was consumed in awkwardly reversing the pole, to take out each fruit, as was expended in actually plucking it.

The best proof, perhaps, that we can offer our readers of the value of the instrument, is, that although it is only a few weeks since **MESSRS. SEDGWICK AND BROOKS** have offered it to the public, there is already as much demand for it as they can supply, with a number of men constantly employed in its manufacture.*

* There are two sizes made. The larger one is best for apples and pears; the smaller one for plums, apricots and other delicate fruits. The price is from \$1.50 to \$2.00, and the agent in New-York is **A. B. ALLEN**, Agricultural Warehouse, 187 Water-street.

Several of our orchardists on the Hudson have bought a number of them, and think it will prove a valuable assistance, even in gathering fruit on a large scale.

We commend it at all events as a most

admirable implement for the amateur fruit-grower—one that will save his best and finest specimens of fruit, the limbs of his trees, and perhaps some little uneasiness of mind.

Do Varieties of Fruit run out?

BY HENRY WARD BEECHER, OF INDIANAPOLIS, IA.

[MANY of our readers are not perhaps aware that one of the ablest and most vigorous writers on horticultural subjects, in the United States, is Mr. BEECHER, of Indiana. We borrow the following interesting article on the subject of the deterioration of varieties from the last number of the *Western Farmer and Gardener*.

Mr. BEECHER we are glad to welcome as an ally of our own. He dissents from Knight's theory, that races soon wear out. We have also had the gratification, since our views, which are essentially the same, were published in our work on *Fruit Trees*, to see them substantially endorsed also by Professor LINDLEY, the highest European authority.—ED.]

.....

We find in the *American Agriculturist* for August the following paragraph from a correspondent:—

"My idea is that a tree has a limit as to age, and that in propagating any particular kind of fruit by grafting or inoculating, you do not renew, you merely continue. Am I to understand you as controverting this position? Do you mean to be understood as asserting that any particular kind of fruit, the Newtown Pippin, for instance, may be kept in existence forever? My idea is, that nature has, in the vegetable as well as the animal kingdom, provided one, and only one way for the renewal of life, and that is by the seed. That by engrafting you merely continue what is already in existence—that the tree which you obtain by ingrafting, is no younger than the tree from which that particular variety was originally obtained."

Is there such similarity between animals and vegetables, in their organic structure, development, and functions, as to make it safe to reason upon the properties of the one from the known properties of the other?

It is admitted that the lowest forms of vegetable existence are extremely difficult to be distinguished from a corresponding form of animal existence. As we approach the lower confines of the vegetable kingdom, flowers, and of course, seeds, disappear. The distinction between leaves and stem ceases; and, at last, the stem and root are no longer to be separated, and we find a mere vegetable sheet or lamina whose upper surface is leaf and whose lower surface is root. In a corresponding sphere animal existence is reduced to its simplest elements. Whatever resemblances there are in the lowest and rudimentary forms of vegetable and animal life, it cannot be doubted that when we rise to a more perfect organization, the two kingdoms become distinct, and the structure and functions of each are in such a sense peculiar to itself, that he will grossly misconceive the truth who supposes a structure or a function to exist in a vegetable, because such structure or functions exist in an animal, and *vice versa*. To be sure, they resemble in *generals* but they differ in *specials*. Both begin in a seminal point—but the seed is not analogous; both develop—but not by an analogous growth; both require food, but the selection, the digestion, and the assimilation are different. The mineral kingdom is the lowest. Out of it, by help of the sun and air, the vegetable procures its materials of growth; in turn, the vegetable kingdom is the magazine from which the animal kingdom is sustained; to each, thus, the soil contains the original elements; the vegetable is the chemical manipulator, and the animal the final recipient of its products. The habit of reasoning from one to the other, of giving an idea of the one by illustrations drawn from the other, especially in popular writings, will always be fruitful of misconceptions and mistakes.

The next idea set forth in the paragraph which we review, is, the *essential dissimilarity of buds and seeds*. The writer thinks that a plant from a seed is a new organization, but a plant from a bud or graft (which is but a developed bud,) is but a continuation of a previous plant. With the exception of their integuments, a bud and a seed are the same thing. A seed is a bud prepared for one set of circumstances, and a bud is a seed prepared for another set of circumstances—it is the same embryo in different garments. The seed has been called,

therefore, a "primary bud," the difference being one of *condition* and not of *nature*.

It is manifest, then, that the plant which springs from a bud is as really a new plant as that which springs from a seed; and it is equally true, that a seed may convey the weakness and diseases of its parent with as much facility as a bud or a graft does. If the feebleness of a tree is general, its functions languid, its secretions thin, then a bud or graft will be feeble,—and so would be its seed; or if a tree be thoroughly tainted with disease, the buds would not escape, nor the trees springing from them—neither would its seed, or a tree springing from it. A tree from *bud* of the Doyenné pear is just as much a new tree as one from its *seed*.

The idea which we controvert has received encouragement from the fact, that a bud produces a fruit like the parent tree, while, often times, a seed yields only a *variety* of such fruit. But, it is probable that this is never the case with seeds except when they have been brought into a state of what Van Mons calls, *variation*. In their natural and uncultivated state, seeds will reproduce their parent with as much fidelity as a bud or a graft.

The liability of a variety to run out, when propagated by bud or graft, is not a whit greater than when propagated by seed, in so far as the *nature of the vegetable* is concerned.

But it is true that the conditions in which a bud grows render it liable to extrinsic ills not incidental to a plant springing from seed. A seed emitting its roots directly into the earth, is liable only to its own ills; a bud or graft, emitting roots through the alburnum of the stock on which it is established, into the earth, is subject to the infirmities of the stock as well as to its own. Thus, a healthy seed produces a healthy plant. A healthy bud, may produce a feeble plant, because inoculated upon a diseased branch or stem.

Instead of a limitation in their nature, there is reason to suppose that trees might flourish in an indefinite age were it not for extrinsic difficulties. A tree, unlike an animal, is not a single, simple organization, it is rather a *community* of plants. Every bud separately is an elementary plant, capable, if disjoined from the branch, of becoming a tree by itself. In fact, each bud emits roots, which uniting together, go down upon a common support (the trunk) and enter the earth, and are there put in connection with appropriate food. Every fibre of root may be traced upward to its bud from which it issued.

In process of time, the elongation of the trunk exposes it to accidents; the branches are subject to the force of storms; in proportion as the distance from the roots increases, and the longer the passages through which the upper sap, or downward elaborated sap travels, the more liabilities are there to stoppage and injury. The reason of decline in a tree is not to be looked for in any exhaustion of vital force, in the organization itself, but it is to be found in the immense surface and substance exposed to the wear and tear of the elements.

It would seem, if this view be true, that no bounds can be placed to the duration of perennial plants, if, by any means, we could diminish their exposure, by reducing their expansion, by keeping them within a certain sphere of growth. *Now this is exactly what is accomplished by budding.* A bud, far removed on the parent stock from the root and connected with it through a long trunk, is inoculated upon a new stock. It now grows with a comparatively limited exposure to interruption or accident. The connection with the soil is short and direct.

In this manner a variety of fruit may be perpetuated to all generations, *if the laws of vegetable health be regarded in the process.* Healthy buds, worked upon healthy stocks and planted in wholesome soil, will make healthy trees; and from these another generation may proceed, and from these another. By a due regard to vegetable physiology, the Newtown pippin, and the Seckle Pear, may be eaten two thousand years hence, *provided, always,* that expounders of prophecy will allow us the use of the earth so long for orchard purposes. A disregard of the laws of vegetable physiology in the propagation of varieties, will, on the other hand, rapidly deteriorate the most healthy sort. There is no clock-work in the branches of the tree, which finally runs down past all winding up; there is no fixed quantity of vitality, which a variety at length uses up, as a garrison does its bread. Plants renew themselves and every year have a fresh life, and, in this respect, they differ essentially from all forms of animal existence. *Any one tree* may wear out; but a *variety*, never.

We need not say, therefore, that we dissent from Knight's theory of natural exhaustion and from every supplement to it put forth since his day. Van Mons' theory of *variation* and the tendency of plants to return toward their original type, is to be regarded as nearer the truth.

REVIEW.

THE TREES OF AMERICA: Native and Foreign, Pictorially and Botanically delineated, and scientifically and popularly described; principally, with reference to their Geography, History, Propagation, Culture, Diseases, &c., &c., their economy in the Arts, introduction into Commerce, and their application in useful and ornamental

Plantations. Illustrated by numerous engravings. By D. J. BROWNE. 1 vol. octavo, 520 pp. \$5. HARPER & BROTHERS, New-York.

THE forest trees of America: what a grand subject for a writer of genius, who is at once a profound observer, and an enthusias-

tic lover of nature! How one's imagination revels in the thought of ancient forests, which yet stand in North America, whose beginning was before Columbus had even projected his seemingly wild scheme of discovering a new world. We have ourselves stood beside two oaks, whose ages were from eight hundred to a thousand years. Douglass, the English botanist, speaks in terms of rapture of the fir forests of California—the magnificent *Picea grandis* and *nobilis*—trees two hundred feet high, whose trunks measure from twelve to forty feet in girth. The latter species—the NOBLE FIR—abounds in the mountains of Northern California, where it covers vast tracts. “I spent three weeks,” says he,* “in a forest composed of this magnificent tree, and day by day I could not cease to admire it.” Yes, though our country is destitute of ruined castles and old tottering strongholds, to tread whose crumbling and time-worn passages carries the mind back in a moment over so wide a space in the history of our race, yet it is scarcely less thrilling to walk beneath the shade of a centennial tree—a real living, growing thing like ourselves, which has stood firm in its place, while empires have tottered and been swept away—while an unknown world has been discovered—and while a new nation has sprung into existence, whose rapidly increasing millions seem scarcely content with an entire continent.

Do our readers know how prodigal nature has been to this continent in the matter of forest trees? The whole number of timber trees indigenous to Great Britain, which grow thirty feet high or more, is only twenty-nine; the whole number of the same class, natives of France, only thirty-four: while North America enumerates forty

species of Oak alone, and thirty-nine sorts of Pine. The total number of the species of trees and shrubs indigenous to this country is about 530. What a forest wealth, compared with that of Europe! Magnolias—Rhododendrons—Kalmias—Tulip Trees, and the like: how meagre would the choicest parks and pleasure grounds of Europe appear, were they stripped of these, their richest treasures of foliage, borrowed from the American soil!

We welcome, therefore, this contribution of Mr. BROWNE's to the gardening literature of this country with pleasure, because we consider the subject he has chosen one in the highest degree interesting and important to every man, whether he live in the country or in town. If he is confined within the narrow limits of a city, he cannot but feel grateful for the patient and enduring trees, that amid the dust and confined air, by the side of streets, and in the midst of small parks, still do not refuse to yield him a cool shade: if he have the good fortune to live in the country, he cannot fail to utter many daily prayers of thanks for the ever varying beauty and loveliness of trees. Not to wish to know something of the character and history of trees, is as incomprehensible to us, as not to desire a knowledge of Niagara, or the Alps themselves.

Every thing that will help to diffuse this information is well for our people. Mr. BROWNE's volume will do it to a considerable degree, because it is not a very dear book, and it conveys a great deal of information in a moderate compass. The subject is plainly and simply treated, and the text is illustrated by many small, neat, and characteristic engravings, showing the flowers and fruit of almost every species.

It must be premised, however, that this is by no means a complete work on the “Trees of America.” Not one of the nu-

* Companion to the Botanical Magazine.

merous Oaks, Beeches, Chestnuts, Birches, or Pines, that constitute the great feature of the American sylva, is described in it. This would seem an extraordinary omission in a volume which gives full length descriptions of such trees as the Mahogany, the Pistacia, the Orange, &c.; but in the preface, we find the following explanatory paragraph: "Should the public demand an extension of the work, conformably to the plan he has adopted, a supplementary volume will follow, embracing an account of most of the other trees growing in Europe and America," &c. So that this work is, as yet, only in part completed.

The only complete work on the trees—of all descriptions—that will flourish in temperate climates, is the celebrated ARBORETUM BRITANNICUM of LOUDON. It is, indeed, not saying too much to affirm that it is the most complete work extant upon any branch of horticulture and natural history. It was the great idea—the *magnum opus*—of its distinguished author, upon which he spent most of his fortune, and the greater part of the last ten years of his life. Numerous artists and engravers were employed for six years upon its illustrations—the latter being no less than two thousand five hundred in number—and many of the most distinguished men of rank and science in Europe and America assisted its author in the collection of the necessary information. The result is a perfect library of information on the subject of all the trees and shrubs that will grow in temperate climates. Eight octavo volumes, published in 1838, (two of which are portraits of remarkable trees,) comprise this great literary work—a work invaluable to the man of country tastes, and a monument to the name of LOUDON far more enduring than obelisks or columns of brass or stone.*

Mr. BROWNE, in the preface of the work before us, informs us that he "personally extended his researches into South America, the West Indies, Europe, and Western Africa, where he availed himself of the advantage of not only verifying or correcting the observations which had been made by others on the trees of these countries, but examined them under various conditions in a state of nature, as well as in nurseries and collections of the curious." Our readers who may not possess Mr. LOUDON's work (published in 1838) would probably be glad to know how much the researches of Mr. BROWNE have added to our previous stock of original information. In order to gratify them, we give, one after the other, some extracts from both works on the same trees.

The following relates to the Red Flowering Maple, *Acer rubrum*, a tree about which Mr. BROWNE, as an American and an author, who has devoted himself specially to this subject, ought to be more thoroughly informed than any European.

From Loudon's Arboretum.

Properties and Uses. In America the wood of the Red-flowering Maple is applicable to several uses. It is harder than that of the White Maple, and of a finer and closer grain; hence it is easily wrought in the lathe, and acquires by polishing, a glossy and silken surface. It is solid, and, for many purposes, is preferred by workmen to other kinds of wood. It is principally employed for the seats of Windsor chairs; the pieces are prepared in the country; and so considerable is the demand, that boats laden with them frequently arrive at New-York and Philadelphia, where an extensive manufactory is carried on for the consumption of the neighboring towns, and for exportation to the southern states and to the West India Islands. The whole frame of japanned chairs is made of this wood, except the back, for which hickory (*Carya*) is chosen, on account of its superior strength and elasticity. The frame, the nave, and the spokes of spinning wheels are made of the Red Maple. At Philadelphia, it is exclusively used for saddle-trees; and, in the country, it is preferred for yokes, sho-

about \$50—prevents its very general dissemination. But, before his death, the author prepared a condensed edition, called the *Encyclopedia of Trees and Shrubs*, in one thick octavo volume, at about one-fourth that price, which contains almost every thing of the greatest value.

* We regret that the necessarily high price of the work—

vels, and wooden dishes, which are brought to market by the country people, and purchased by the dealers in wooden-ware. It sometimes happens that in very old trees, the grain, instead of following a perpendicular direction, is undulated; and this variety bears the name of the *curled maple*. This singular arrangement is never found in young trees, nor in the branches of even such as exhibit it in the trunk; it is also less conspicuous in the centre than near the circumference. Trees having this character of wood are rare, and do not exist in the proportion of one to a hundred. The serpentine direction of the fibre, which renders them difficult to split and to work, produces, in the hands of a skilful mechanic, the most beautiful effects of light and shade. These effects are rendered more striking, if, after smoothing the surface of the wood with a double-ironed plane, it is rubbed with a little sulphuric acid, and afterwards anointed with linseed oil. On examining it attentively, the varying shades are found to be owing entirely to the inflection of the rays of light; which is more sensibly perceived on viewing it in different directions by candle-light. Before mahogany became generally fashionable in the United States, the best furniture in use was made of the Red-flowering Maple, and bedsteads are still made of it, which in richness and lustre exceed the finest mahogany. At Boston, some cabinet-makers saw it into thin plates for inlaying mahogany; but the most constant use of curled maple is in the stocks of fowling pieces and rifles, which, to elegance and lightness, unite toughness and strength, the result of the twisted direction of the fibres. The cellular matter of the inner bark is of a dusky red. By boiling it yields a purplish color, which on the addition of sulphate of iron, becomes dark blue, approaching to black. It is used in the country, with a certain portion of alum in solution, for dyeing black. The wood of the Red-flowering Maple does not burn well, and is so little esteemed for fuel, that it is rarely brought for that purpose into the cities. It has but little strength, is liable to injury from insects, and ferments and speedily decays when exposed to the alternations of dryness and moisture. For these reasons, though it is now extensively used in America, its importance in the arts is not sufficient to entitle it to preservation; and Michaux supposes that, when artificial plantations become necessary in the country, the Red Maple will be altogether omitted. The French Canadians make sugar from the sap of this maple, which they call *plaine*; but as in the preceding species, the product of a given measure is only half as great as that obtained from the Sugar Maple. (*Michaux.*) In Britain and throughout Europe, the sole use of the Red-flowering Maple is as an ornamental tree; and whether we regard the beauty of its flowers and opening leaves in early spring; of its red fruits in the beginning of summer, or its red foliage in autumn, it deserves to be considered one of the most ornamental of hardy trees.

From Browne's "Trees of America."

The wood of the *Acer rubrum*, when dry, weighs forty-four pounds to a cubic foot, and when green, it is soft, full of aqueous matter, and loses in dry-

ing nearly one-half of its weight. In this tree, as in others which grow in wet places, the sap-wood bears a large proportion to the heart-wood, the latter of which consists of an irregular column, star-like in its transverse section, and occupies the central parts of large trunks, with its points projecting into the sap-wood. This wood has but little strength, is liable to injury from insects, and ferments and speedily decays, when exposed to the alternations of moisture and dryness. Yet it is solid, and for many purposes, is preferred by workmen to other kinds of wood. It is harder than that of the White Maple, and of a finer and closer grain; hence it is easily wrought in the lathe, and acquires, by polishing, a glossy and silky surface. It is principally employed in the manufacture of chairs, saddle-trees, shoe-lasts, ox-yokes, broom-handles, and various other articles of domestic use. It sometimes happens, that in very old trees, the grain of the wood, instead of following a perpendicular direction, is undulated; and this variety bears the name of *curled maple*. This singular arrangement is never found in young trees, nor even in the branches of such as exhibit it in the trunk; it is also less conspicuous in the centre of the tree than near the bark. Trees offering this disposition, however, are rare. The serpentine direction of the fibres, which renders this wood difficult to split and to work, produces, in the hands of a skilful mechanic, the most beautiful effects of light and shade. These effects are rendered more striking, if, after smoothing the surface of the wood with a double-ironed plane, it is rubbed with a little sulphuric acid, and afterwards with linseed oil. On examining it attentively, the varying shades are found to be owing entirely to the inflection of the rays of light; which is more sensibly perceived in viewing it in different directions by candle light. Before mahogany became generally fashionable in the United States, the best furniture in use was made of the Red-flowered Maple, and bedsteads are still made of it, which, in richness of lustre, exceed those of the finest imported woods. But one of the most constant uses to which the curled maple is applied, is for the stocks of rifles and fowling pieces, which, to elegance and lightness, unite toughness and strength, the result of the tortuous direction of the fibres. The cellular matter of the inner bark is of a dusky red. By boiling, it yields a purplish colored liquor, which, with the addition of sulphate of iron, (copperas,) acquires an intense dark blue, or black, and is sometimes employed as ink by American youth in village schools. For this purpose, however, it is very inappropriate, as it never dries properly, and in damp weather, the writing becomes glutinous and blots. A fluid prepared in a similar manner, by adding sulphate of alumina (common alum,) instead of copperas, is also used for dyeing black. The French Canadians make sugar from the sap of this maple, which they call *plaine*; but, as in the preceding species, the product of a given measure is not more than one-half as great as that of the Sugar Maple.

In Britain and throughout Europe, the sole use of the *Acer rubrum* is as an ornamental tree; and whether it is viewed in the beauty of its flowers and

opening leaves in early spring; or admired for its red tint in the beginning of summer, and its crimsoned foliage in autumn, it deserves to be ranked as one of the most ornamental of hardy trees. Page 100.

The following is the description of the common Dogwood, *Cornus florida*, of our woods, in the words of both authors.

From Loudon's Arboretum.

Cornus florida is universally allowed to be the handsomest species of the genus. In its native country, it forms a tree reaching, in the most favorable situations, thirty or thirty-five feet in height, with a trunk nine or ten inches in diameter; but in general it does not exceed the height of eighteen to twenty feet, with a trunk of four to five inches in diameter. Michaux describes the trunk as "strong and covered with a blackish bark, chopped into many small portions, which are often in the shape of squares more or less exact. The branches are proportionably less numerous than on other trees, and are regularly disposed, nearly in the form of crosses. The young twigs are observed to incline upwards in a semicircular direction. The leaves are opposite, about three inches in length, oval, of a dark green above, and whitish beneath; the upper surface is very distinctly sulcated. Towards the close of summer they are often marked with black spots; and at the approach of winter they change to a dull red. In New-York and New-Jersey, the flowers are fully expanded about the 10th or 15th of May, when the leaves are beginning to unfold themselves. The flowers are small, yellowish, and connected in bunches, which are surrounded with a very large involucre, composed of four white floral leaves, sometimes inclining to violet. This fine involucre constitutes all the beauty of the flowers, which are very numerous, and which, in their season, "robe the tree in white, like a full-blown apple tree, and render it one of the fairest ornaments of the American forests." Catesby, who first described this tree, says that the blossoms break forth in the beginning of March, being at first not so wide as a sixpence, but increasing gradually to the breadth of a man's hand; being not of their full bigness till about six weeks after they begin to open. The fruits which are of a vivid glossy red, and of an oval shape, are always united; they remain on the trees till the first frosts; when, notwithstanding their bitterness, they are devoured by the Red-breasted Thrush (*Turdus migratorius*, L.) which about this period arrives from the northern regions, and the Mocking Bird (*T. polyglottus*, L.) during the whole winter. Page 1018.

From Browne's "Trees of America."

Of all the species of the genus, the *Cornus florida* is allowed to be the most beautiful. In its natural habitat, when grown under favorable circumstances, it forms a tree attaining a height of thirty to thirty-five feet, with a trunk nine or ten inches in diameter; but in general it does not much

exceed one-half of these dimensions. The trunk is covered with a blackish bark, chopped into many small portions, which are often in the shape of squares more or less exact. The branches, which are not so numerous as on most other trees, are regularly disposed, with their young twigs inclining upwards in a semicircular direction. The leaves are opposite, about three inches in length, ovate, acuminate, of a dark green above, and whitish beneath, with the upper surface very distinctly sulcated. Towards the close of summer, they are often marked with black spots; and at the approach of winter they change to dull red. The flowers, which appear in Florida in March, and in New-York in May, are small, yellowish, and connected in bunches, surrounded with a very large involucre, composed of four white floral leaves, sometimes inclining to violet. This fine involucre constitutes the chief beauty of the flowers, which are very numerous, and which, in their season, "robe the tree in white, like a full-blown apple tree, and render it one of the fairest ornaments of the American forests." The fruits, which are of a vivid glossy red, and of an oval shape, are always united, and remain upon the trees till the appearance of the first autumnal frosts, when notwithstanding their bitterness, they are devoured throughout the winter, in the southern states by the mocking bird (*Turdus polyglottus*,) and the American robin or red-breasted thrush, (*T. migratorius*,) the latter of which, about this period, arrives from the regions of the north. Page 350.

These extracts are taken at random from the work. The character of nearly the whole volume is precisely similar to our quotations—that is to say, instead of using his own language to describe trees, their properties, characters, etc., Mr. BROWNE has paid Mr. LOUDON the compliment of using his, though he has omitted, in many cases, half or two-thirds of the matter given in the *Arboretum*. Would it not have been better and juster, therefore, to have called the work "An Abridged Compendium of Loudon's Arboretum," than the "Trees of America?" But in order even to make that title a proper one, another volume, containing the Oaks and the numerous large forest trees before mentioned, would be needed.

Mr. LOUDON's name is scarcely mentioned in the body of the work, though the author acknowledges in the preface that he is "particularly indebted" to him. Dr. HARRIS's

Treatise on Insects is pretty largely quoted, and to this excellent work full credit is given in the usual manner.

The *plan* of the volume before us, which is copied from LONDON, is an excellent one. First, the character of the genus is given; then that of the species, with the various synonyms and derivations; this is followed by the popular description; the character of the varieties; the geography and history; the soil, situation and propagation; the insects and diseases; and finally the properties and uses.

In the preface, the author informs us that he "undertook the preparation of a work on the trees of this country, more complete and extensive than had hitherto been published." On looking through its pages, we find *two trees* described, which are not contained in Loudon's Arboretum, viz., *Bursera gummifera*, a native of the West Indies, and *Ilex paraguariensis*, a native of South America. Neither of them will grow in gardens in this country without protection. On the other hand, LONDON'S work contains at least a hundred species of North American forest trees not described in this work.

We do not know that Mr. BROWNE makes any pretension to being a *practical* arboriculturist. If he did, we should find great fault with him in many cases; for example, he does not tell us, while praising loudly the European Holly for hedges, and recommending its general use, the lamentable truth that it will not stand the winters of this climate under ordinary circumstances, north of Philadelphia. Under the section of "soil, situation and propagation" of the Pomegranate, the novice will find it stated that "the single wild pomegranate will grow in almost any soil." Not a

word of its being a tender or half-hardy tree is mentioned in the remainder of the paragraph, where one would naturally expect it; but in another page, we learn that "it is also cultivated as a wall tree, or as a conservatory plant, in various parts of the middle and northern states, where it is highly prized."

We have no room for numerous other comments of a like nature, that are suggested. But we trust if Mr. BROWNE pursues his subject in another volume, on the remaining forest trees of this continent, he will make use of the rich materials which, we assure him, still remain to be collected in this country regarding our native trees. Notes on their adaptation to particular soils—the greater or less facility with which they may be transplanted—and the aspects where they will and will not grow—are all subjects which ought properly to be embraced in such a work as this. If an author, devoted to this subject, were to extend his researches sufficiently to take portraits and give accounts of such trees as the grand oaks on the Wadsworth estate in the Genesee valley, the truly unrivalled elms of the Connecticut river, and above all, the gigantic pines of California, he would be working a mine of native arboricultural wealth, which his countrymen would use and acknowledge the value of with profound gratitude.

We have no doubt that this volume, very neatly published by the enterprising house of the HARPERS, will find many purchasers, and will convey a great deal of information to those who cannot possess LONDON'S "Trees and Shrubs." To those who can, we cannot too strongly recommend the latter work, as far more perfect, and indeed the best book of its kind in the world.

FOREIGN NOTICES.

THE GREAT HAIL STORM.—The effects of the great hail storm in the vicinity of London, on the first of August, appear to have been most disastrous to the interests of horticulture. The South London Floral and Horticultural Society have made a report that "the losses sustained by those engaged in horticultural trade in the neighborhood of Stockwell, Clapham and Brixton, amounted to no less a sum than £18,000" (about \$90,000.) A public meeting was held at the London Tavern, on the 17th of August, for the relief of those who suffered most severely. The Duke of Cambridge presided. A public subscription was opened, and about \$1,800 was subscribed on the spot, his Royal Highness subscribing 20 guineas, the Lord Mayor 10 guineas, Dr. Lindley 10 guineas, etc. J. Almett, Esq., stated that 3000 squares of glass had been broken in his conservatory. An efficient committee, with the Lord Mayor at its head, was appointed to carry out the objects of the meeting, by soliciting farther subscriptions.

On the 24th and 25th of August, a floricultural fête was held at the Surrey Zoological Gardens, in behalf of the sufferers. It was well attended, and many plants, bouquets and fruits were sent to be sold, and the proceeds added to the fund.

PARIS HORTICULTURAL SHOW, August, 1846.—The Paris Société Royale d'Horticulture held its grand show on the 7th, 8th and 9th of August. The time selected is complained of as being always an unsuitable one, and the present season particularly so—"the excessive heat and drouth, which for the last two or three months have been almost unprecedented, even in Paris, scarcely a drop of rain having fallen for the last ten weeks, Roses, Dahlias, and other flowers, have been at times literally scorched to powder; and the ravages of the Thrip and Red Spider almost universal." Under these circumstances, the exhibition is spoken of as having been a creditable one—the number of exhibitors not so numerous as previously, but the plants of a better description.

The prizes offered were two gold medals by the Duchesse d'Orleans and the Princesse Adelaide, and sixteen silver medals, and the like number in bronze by the Society.

The finest and best cultivated plant shown was *Dichorizandra ovata*, by M. Ryfkoel, for which a silver medal was given. M. Crochet obtained a prize for two magnificent Canteloupe melons, weighing from twelve to eighteen pounds each. The gold medal of the Duchesse d'Orleans was awarded to M. Jaquin Aîné, for a miscellaneous collection of plants. "M. Jamin sent the plums Reine Claude (Green Gage) and Reine Victoria, really fit to set before a queen. Neither grapes nor peaches," observes the correspondent of the Chronicle, "were worthy of France."

INDIAN CORN BREAD-STUFFS IN ENGLAND.—The English journals abound with recipes for the manufacture of the "staff of life," in various

forms, from our Indian corn. Elihu Burritt, better known in this country as the "learned blacksmith," of New-England, appears to be devoting himself to teaching the inhabitants of Great Britain how to feed the *million* with this cheap and wholesome food. We have seen extracts from a pamphlet of his published there, which gives a great number of popular American recipes for such bread as "Johnny cake," "Indian Pound cake," "Corn Meal cake," "Corn Dodgers," "Hoe cake," "Corn muffins," "Hasty Pudding bread," "Hominy," &c., &c. If these get fairly naturalized among the middle classes of Great Britain and Ireland, as there is at present every reason to believe they will, we cannot doubt that Indian Corn will, at no distant day, become to America the most profitable of exportable products. The climate of Great Britain will not produce it, and the soil and climate of the United States, throughout the whole length and breadth of the country, are so highly favorable to it, that its production may be increased to an almost unlimited extent.

THE POTATO DISEASE.—The potato disease, as we learn by the last files of our agricultural papers by the steamer, down to the 29th of August, is dreadfully prevalent in all parts of Great Britain and Ireland. Many districts that altogether escaped last season, are suffering badly this year; and in various parts of the country, the crop is already entirely destroyed—or so far gone that the putrid smell arising from the fields is very offensive. Those who planted in peat soil, or used soot in the drills, in the hope of preventing the disease, have suffered alike with those who have planted in the common way. It is now thought that the cultivation of the potato, on a large scale, will have to be abandoned, for the present at least, in Great Britain, and attention must be turned to field peas, Swedish turnips or something of the kind in its stead.

A GARDEN ON THE HOUSE TOP.—In Sweden it is not an uncommon sight in the country, and sometimes even in the villages, to see the roofs of the poorer cottages covered with herbs which serve as pasture for the goats. In Norway they even plant trees in the turf which covers the roofs, and to such an extent is this carried, that some of their hamlets or villages, seen at a distance, have quite the air of a little wood. Nothing is more common than to see rude kitchen gardens on these roofs of the houses.—*Revue Horticole.*

LONDON ZOOLOGICAL GARDENS.—Of the London Zoological Gardens I had formed too exalted an idea; perhaps, too, the sight of noble animals in confinement is naturally painful. As a garden, the place is well enough; and much is done to render the prisoners comfortable. The bears get plenty of cake for climbing up a long pole; the monkeys chatter and frolic as much as one could wish; while the elephants bathe in a miniature lake, and look sulky; and the cameleopards enjoy

their high-roofed stable. But notwithstanding the efforts of the projectors to imitate the natural haunts of the animated race, the garden is to me a dull place.

One hint obtained here may be useful in America; the *donkey* is employed to drag the rollers over the gravel walks—he is too light to make more impression on the gravel than the roller will obliterate. This useful little animal is employed in Europe in various ways to great advantage; his introduction into the general field of labor is one of the things we have yet to learn. His appetite is easily satisfied, requiring less than a large dog; his labor, even as a burden carrier, would well repay his importation; he pulls well in a small cart, and in this is most useful in cities to carry marketing. He would take the whole produce of a small kitchen garden as well as a horse, while his cost and maintenance would be a very trifle. To the poor man, he would prove in America, an admirable help, not dainty as to the quality or quantity of his food.—*Smith's Jaunt across the Water.*

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PERE LE CHAISE CEMETERY.—The cemetery of Père le Chaise greatly disappoints me. It is large, and has a very fine view of Paris from its heights; but nearly the whole place is dirty or neglected. The monuments are mostly of yellow stone, very much out of taste, extremely numerous, often badly constructed and tumbling about, while weeds disfigure many—many others. The mass of the monuments may be said to be little chapels, with a grated door, an altar inside, candlesticks, and a chair or two; while the wreaths of *immortelles*, artificial flowers, vases, flower-pots, old china, or gew-gaws, are pictures of distorted grief. In one or two instances, a bust was dressed up in *immortelles*, with ear-rings; the flowers and face too made by time as black as a negro's. When there is no chapel, a painted half circle of tin runs across from one iron railing to the other, to protect the wreaths from wet; and here and there are sometimes dozens of these wreaths strung up, some being made of whalebone frizzled, in the manner of the British lawyers' wigs, and the rest of flowers. Very queer vases, with flowers, are sometimes seen. Occasionally a good rosebush or honeysuckle overruns a little plot, shaded perhaps, on each side by chapels. Some of the monuments are lofty and costly; among the latter are those of Casimir Perrier, and some of Bonaparte's marshals. Ney has no name on his grave, that privilege having been denied to the family of a proscribed man; but some one has scraped the little word in the paint of the railing, with a pin; it has more celebrity, and is more visited than the most costly inscriptions. A road winds about the cemetery, paved with square stones. It is much used, and is very dusty. Interments of persons of all sizes, ages, and degrees, from the little infant of poor parents, carried on a shabby bier to the place for those who cannot or will not pay for the ground in perpetuity, to the soldier whose grave they were firing over, or the nobleman attended by a host of followers, may be seen going on at the same moment. The funerals are extremely numerous every day, but no statistics were to be obtain-

ed. Altogether the aspect of the place was that of a city of the dead, not that of a rural cemetery. I have seen no rural cemetery in Europe that will compare with the best at home for beauty of scenery, careful keeping, or planting. The two best in England are very inferior in these important respects; I mean the St. James's at Liverpool, and Kensall Green, near London.—*Smith's Jaunt across the Water.*

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ACHIMENES PEDUNCULATA.—Beautiful as this family of plants is, none of them seems to outvie this variety. In habit it is robust and stately, giving it an especial claim to attention. I manage it as follows:—After flowering, and when the foliage has begun to decay, water is withheld, and the plants are kept in a dry situation, out of the reach of frost. About the middle of January, the old soil is shaken from them, and they are planted in pans well drained, in a mixture of charcoal broken to the size of a nut, turfy peat, and burnt turf well mixed with silver sand. The pans are filled to within about an inch of the top, the tubers are laid regularly on, and the pans filled up. They are then placed in a warm situation in a vinery near the glass, where in a short time the plants make their appearance: they are then transplanted singly into small pots, and as soon as the roots appear on the outside of the ball, they are repotted three into a well drained 6-inch pot. As soon as the second pair of leaves unfold, the top is pinched off, and this operation is continued till the plants form quite a bush; the syringe is drawn over them every fine evening. About the middle of May, they are removed to the green-house, when they soon show flower. By following this system no sticks are required. This is the best of all the species for the drawing-room; several plants that have been in the room for the last three weeks, have not lost a leaf; and they are studded with a profusion of lovely orange flowers.—*E. S. in Gardener's Chronicle.*

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HEALTHY POTATOES PRODUCED FROM DISEASED SETS.—On taking up the crop last autumn, a considerable quantity of the worst tubers, (which, though so much affected as to be easily perforated with the finger, were yet sprouting at one end,) were planted immediately. Others, to all appearance even worse than these, were thrown together in a heap to rot. During the winter they sprouted, and in January many of these were also planted. Strange to say, the produce from these roots is the best crop in the field—indeed, an excellent crop, and of good quality; and it is required now to dig as large a portion of ground in any other part of the field to find a basket of good potatoes, as in the part where these diseased tubers were planted to find a basket of bad ones. Lime rubbish from old walls was laid in the bottom of the trench, on which was placed some old thatch, and the potatoes planted thereon, and covered with earth so that they lay as dry as possible.—*Constant Reader, in Gard. Chron.*

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POTATO DISEASE IN NORTH OF IRELAND.—Between the 12th and 20th of August, I traversed the

province of Ulster, passing from Dublin to Belfast and Coleraine; and thence southwards, by Armagh, Monaghan, Fermanagh, and Cavan, through Meath to Dublin again, the only county which I did not see being Donegal. During my whole course, I saw but one field of potatoes which was not evidently and hopelessly affected by the disease; that field was close to the city of Armagh. The dry and the wet lands seemed alike blighted, the levels and the slopes. The crops growing on soil along the volcanic rocks, on the chalky and the mountain limestones, on the gravel, the sand, and the bog lands, appeared all equally destroyed, so far as a passing eye could judge. The fields cultivated in the usual Irish ridge bed mode, and also those in the better drilled rows, were alike. All had the appearance of having been struck with frost, the blackness of the leaves travelling in general upward from the roots. Some fields were so bad, that the peculiar scent of the disease was perceptible even from the adjoining road. Fields which had, as I was informed, looked well a week before, were now gone, and I was told, that, in some instances, a single day had sufficed to throw the blight over the whole surface of a field. The roots which I saw were every where small and watery, even where they were not unequivocally diseased; and this not only in the late kinds, which of course are quite unripe, but even in the earlier varieties, which, at this season, ought to be mealy and wholesome. The rich and the poor held but one language, that of deep dejection, and the universal impression seemed to be, "the potatoes are leaving Ireland forever." Yet the poor, both Protestants and Romanists, seemed to feel contented, for they said, "the Almighty will never leave us to starve; some other food will be sent us." I could not help noticing that the turnip crops were most promising where the potatoes seemed most destroyed.—*A. W. B. in Gard. Chron.*

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WASP TRAPS.—Take two hand-glasses of a similar shape and size, place one of them on four bricks, then with the point of a knife, carefully take out one of the panes a little below the top; turn the other glass upside down, and sprinkle the inside with a mixture of honey and vinegar which will create a scent; place it immediately over the one resting on the bricks. If the two glasses should not fit exactly, as they seldom do, on all four of the sides, get some wet moss and squeeze it into the apertures with a pointed stick. The

trap will now be complete. In consequence of the glasses being elevated on bricks (inverted flower-pots will answer as well,) the wasps will obtain a ready admission underneath, and directly mount up through the opening made in the under glass into the apartment above; and, as a wasp never flies downward, they will never get out where they got in, consequently they will all be made prisoners, if the upper glass be free from holes. In the course of a day or so they will all be dead; but in order to destroy them as quickly as possible take some brown paper previously dipped in melted brimstone, apply a match to it, and place it under the glasses; the fume will soon ascend through the opening mentioned before into the upper chamber, and kill them all in a minute. Should the wasps be numerous, and one trap only be found insufficient, several should be employed; I have sometimes had ten in different parts of the garden. Every other day the upper glass should be taken off and sprinkled as before, or oftener than this, if brimstone be used. I have, in some seasons, ensnared myriads of those vexatious enemies by the plan just described. I do not mean to say that it will do away with the necessity of destroying the nests; I would advise this to be done by the following easy method. Wherever they are found, pour into the hole a little gas tar, place a bit of turf on it, and tread it down hard, and all that are at home will die.—*Joseph Melony, Brightwell, Aug. 24. Gardener's Chronicle.*

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CURE FOR THE CATERPILLAR.—A gentleman at Galashiels has discovered that exhausted bark spread on the surface round the roots of gooseberry bushes, is an effectual remedy for caterpillar. His garden used to be much infested by these destructive insects, which he had tried various modes of rooting out without success, until a lucky chance led him to try the effect of refuse bark from the tannery. Two years ago he spread a considerable quantity of it round the roots of all the bushes in his garden, except one or two. Those missed were seriously injured by the caterpillar; all the others were perfectly saved. The next year he neglected to renew the bark, and every bush in the garden was affected with the disease. This year he again resorted to it, and not a single caterpillar is to be seen. A more simple and cheap remedy could scarcely be wished for. A cartload of the bark, which costs about sixpence, is amply sufficient for the largest garden.—*Gardener's Chronicle.*

DOMESTIC NOTICES.

THE GREAT HORTICULTURAL SHOWS.—September, teeming, fruitful September, has as usual witnessed the rich and beautiful offerings of the votaries of Flora and Pomona, in all parts of the country. The three most attractive displays have been those of Boston, Philadelphia and Auburn. At the two first named places the Massachusetts and Pennsylvania Horticultural Societies have held their great

annual shows; at Auburn, the New-York State Agricultural Society opened its great fair for this year.

The season is not considered a very favorable one either in New-York or the Eastern States, for a show of fruits generally. The weather has been such that a premature ripening of many fine varieties had taken place before the season of exhibi-

tion, so that the *variety* shown was somewhat diminished.

It has been a matter of much regret to a great number of persons interested in these three leading shows, that, by some want of proper management, their exhibitions all came off on the same days, the 16th, 17th and 18th of the month. This deprived many persons of the satisfaction of attending more than one of the shows, who were very desirous, both for purposes of pleasure and instruction, of attending all of them.

THE EIGHTEENTH ANNUAL EXHIBITION OF THE MASSACHUSETTS HORT. SOCIETY.—The eighteenth annual exhibition of the Massachusetts Horticultural Society was opened to the public in the Society's large hall, at 12 o'clock the 16th of September, and continued the two following days and evenings. The hall was thronged with visitors during the whole time. Most of the Horticultural Societies of New-England, and some from New-York, were represented either by delegates or members; and many distinguished strangers, as well as citizens, were present to admire the rich profusion of fruits, flowers, and decorations.

Those who have been familiar with the past exhibitions of the Society, were satisfied that some improvement was manifest in the present one over those which have preceded it. The fruits, flowers and decorations were well harmonized, and produced a happy effect. The floral designs and decorations were in better taste than those exhibited last year, and to a portion of the visitors appeared to be the greatest attraction; but to the horticulturist, the fruits were the most prominent part of the exhibition. The cut flowers were deficient in quantity, variety and quality. The Dahlia and German Aster, so beautiful and perfect at this time of the year in most seasons, and which have contributed so much to the brilliancy of past exhibitions, were comparatively few and imperfect; there were some exceptions to the Dahlias, particularly on the last days of the exhibition, when some fine specimens were brought in. The first part of the month of September, as all know, was excessively warm, which, with absence of rain, and a high wind previous to the exhibition, nearly destroyed this flower for the occasion.

The fruits were arranged on two long central tables, and one side table, forty or fifty feet long. They were ornamented with four marble statues representing the seasons, the Society's superb new marble, and the rich Chinese Bradley vases, in which were large pyramidal bouquets. On the tables were also numerous hand and table bouquets. On one table was a superb tripod hung with clusters of luscious grapes of different colors and varieties, from Mr. Cushing's garden, arranged by Mr. Haggerston. Another table bore a pyramidal design, covered with evergreen, and hung with a superb collection of grapes from Mr. Horace Grey, arranged by Mr. Russell. Mr. Arnold of New-Bedford, and O. H. Mather of Brighton, by Mr. Needham, exhibited rich clusters of grapes in fanciful designs. Numerous dishes of grapes, grown in the most perfect manner, were to be seen from the conservatory of T. H. Perkins, Esq., exhibited by Mr. Quant. A

superior specimen of Wilmot's Black Hamburgh, remarkably large and fine, was exhibited by Messrs. Hovey & Co. Grapes were also exhibited by others very finely grown; and in fact we have never seen a finer show of grapes. There were some baskets of assorted fruit, beautifully ornamented, containing peaches, nectarines, pears, grapes, plums, etc. The show of peaches was excellent, there being many very beautiful specimens on the tables. Though rather late in the season for plums, they were presented in sufficient quantity to make up a fair assortment.

Pears were never exhibited in greater variety, but we believe it was generally admitted that finer specimens of some of the more prominent sorts were exhibited the last season. M. P. Wilder, President of the Society, exhibited *one hundred and fifty-four* varieties, and Mr. Manning of the Pomological Garden, Salem, *one hundred and seventy-five*. There were also large contributions from many other gentlemen, as will be perceived by the official report, which will be published in the November number of the Horticulturist.

B. V. French, of Braintree, exhibited the greatest variety of apples, including many that were very beautiful. Large contributions of this fruit were also received from many other individuals.

The principal designs were a Floral Grecian temple, by Mr. Quant; a Swiss Cottage, by Mr. Warren; a Gothic Monument by Mr. West; a Chinese Pagoda, by Walker & Co.; a Gothic Arbor, by Mr. Galvin: these were placed at each end of the several tables. The walls were also decorated with a variety of large flat bouquets and designs, and numerous moss vases, and other articles. There were also a dozen fine specimens of dwarf Cockscombs, finely grown by Mr. Quant, distributed about the walls, and some few pot plants, as many as could be placed to advantage in the hall.

Taking all things into consideration, this exhibition was one of the best ever got up by the Society; and we believe there was a general satisfaction among the members as to its appearance. We can truly say that there is a growing taste in the country for horticultural pursuits, and that an increasing interest is manifested at each exhibition of the Society. J. B.

REPORT OF THE COMMITTEE OF THE MASS. HORT. SOCIETY ON DESIGNS.—The Committee to whom was assigned the duty of awarding the Society's premiums for designs and floral decorations, at the annual exhibition, Sept. 16, 17, and 18, having attended to that duty, respectfully submit the following report:

The first premium of \$10 to Wm. Quant, gardener to T. H. Perkins, for his beautiful Grecian Floral Temple.

To Walker & Co., the second premium of \$30, for their much admired Chinese Pagoda.

To J. L. L. F. Warren, the third premium of \$20, for his neat Swiss Cottage.

To W. Sheehan, gardener to R. West, of Salem, the fourth premium of \$10, for his fine Gothic Monument.

To John Galvin, gardener to Thomas Moley, Jr., the fifth premium of \$5, for his Gothic Bower.

To Daniel Crowley, gardener to J. L. Gardener, the first premium of \$10, for the best pair of large flat bouquets for the walls.

To James Nugent, the second premium of \$5 for the second best flat bouquets.

To Hovey & Co., for the best round pyramidal bouquet for the Society's vases, the first premium of \$8.

To S. A. Walker, for the second best pyramidal bouquet, \$5.

To Hovey & Co., for the best pair of Mantel or Table bouquets, the first premium of \$5.

To W. E. Carter, for the second best table bouquets, a premium of \$3.

To Hovey & Co., for the best pair of hand bouquets, the first premium of \$3.

No award for the second premium.

Mrs. R. Bowker, for the best design of native grasses or mosses, the first premium of \$10.

Mrs. E. A. Story, for a like design, the second premium of \$5.

Gratuities.—To Miss R. Bowker, a gratuity of \$5, for a very tasteful wreath of grasses for the clock.

To S. A. Walker, \$10 for a beautiful flat design.

To S. A. Walker, \$8 for 100 feet of beautiful wreathing.

To Mr. McNeil, gardener to J. W. D. Williams, \$5 for a flat design.

To Miss Barnes, Dorchester, \$2 for a basket and bower of flowers and evergreens.

To Orr N. Towne, \$2 for a flat design.

To Wm. Kennek, \$3 for an ancient lyre.

To Edward Allen, \$3 for a large flat design.

To Miss Russell, \$8 for a large bouquet and moss vase.

To Samuel Walker, \$3 for a large flat bouquet.

To Thomas Needham, gardener to O. H. Mather, \$6 for a beautiful vase and bouquet.

To Mrs. E. A. Story, \$3 for a beautiful circular design.

To Hovey & Co., \$2 for a pair of flat bouquets.

To Charles Mayert, \$1 for designs for landscape gardening.

To J. L. F. Warren, \$5 for a unique pyramidal bouquet, composed of vegetables.

To W. Quant, \$2 for a pyramidal bouquet.

To the Messrs. Wmshap, \$2 for a pyramidal bouquet.

To Wm. Quant, \$5 for twelve plants of fine dwarf Cockscombs, and other pot plants.

JOSEPH BRECK,
DAVID HAGERSTON,
C. M. HOVEY,
H. W. DUTTON,
ALEX. MCLENNAN, } Committee.

REPORT OF THE COMMITTEE OF THE MASS. HORT. SOCIETY ON FRUITS.—The Committee to whom was assigned the duty to award the premiums on fruits at the annual exhibition of the Mass. Hort. Society, have attended to that duty, and respectfully report that they have unanimously awarded the premiums to the following persons:

Apples.—For the greatest number of kinds, and the best grown, a premium of \$10 to B. V. French.

For the second best, a premium of \$5 to Messrs. Hyde.

For the third best, a premium of \$3 to Capt. Macondray.

Pears.—For the greatest number of kinds and the best grown, a premium of \$10 to Col. M. P. Wilder.

For the second best, a premium of \$5 to S. Walker.

For the third best, a premium of \$3, to J. S. Cabot.

Grapes.—For the best exhibited, the first premium of \$10 to D. Hagerston.

For the next best, a premium of \$7 to Thomas Needham.

For the third best, a premium of \$5 to Hovey & Co.

For the greatest number of varieties, and the best grown, a premium of \$10 to J. F. Allen.

For the next best, a premium of \$5 to Wm. Quant.

For the best basket of assorted fruit, a premium of \$10 to O. Johnson.

For the best dish of Apples, (Gravenstein,) a premium of \$5 to Messrs. Hyde.

For the next best, (Porter,) a premium of \$3 to O. Johnson.

For the best dish of Pears, (Bartlett,) a premium of \$5 to Mr. J. F. Allen.

For the second best, a premium of \$3 to S. Walker.

Gratuities.—To James Arnold of New-Bedford, \$5 for fine specimens of Grapes.

To W. H. Denning, of Presque Isle, N. Y., \$5 for superior specimens of Beauty of Kent apples.

To Horace Grey, of Brighton, \$5 for fine Grapes.

S. WALKER,
DAVID HAGERSTON,
F. W. MACONDRAY,
JOSIAH LOVETT,
OTIS JOHNSON, } Committee.

REPORT OF THE COMMITTEE OF THE MASS. HORT. SOCIETY ON VEGETABLES.—The Committee appointed to award premiums on Vegetables, report as follows:

For the best display and greatest variety at the Annual Exhibition, a premium of \$10 to Aaron D. Williams & Son, of Roxbury.

For the second best, a premium of \$7 to F. W. Macondray of Dorchester.

The Committee recommend a gratuity of \$3, for a wreath of Corn of 12 varieties, to J. L. F. Warren.

Also a gratuity of \$2 to E. Wight of Dedham, for a variety of Squashes.

JOSEPH BRECK,
A. D. WILLIAMS, JR., } Committee.
Wm. E. KINGSBURY, }

THE ANNUAL SHOW OF THE PENNSYLVANIA SOCIETY.—The exhibition is considered in all respects one of the finest which the Society has ever made. Both of the large saloons of the Philadelphia Museum Building were entirely occupied with the articles contributed.

The great feature of the Philadelphia shows lies in the *Floral* department, as contrasted with the Boston Show, which is pre-eminently distinguished for its *Fruits*. On entering the lower saloon, the splendor of the *floral devices* immediately arrested the attention. We do not refer to the *bouquets* of every variety of form, such as are commonly seen at exhibitions, but *rustic, architectural and grotesque devices*, of very large size, and striking appearance, most elaborately executed in flowers. Towering above all the rest in size, was one of these in the form of a *Chinese Pagoda* by Samuel Maupay, which reached nearly to the ceiling of the saloon. The design, which was pronounced in the best taste, and most perfectly executed, and which therefore received the Society's first premium of \$40, was a *Gothic Temple*, made by A. Henderson. Besides these, there were rural grottos, rustic arbors, triumphal arches, pyramids, urns, cornucopias, etc., all formed in the most elaborate manner, of flowers, leaves, and moss, woven together as ingeniously as if by Flora herself.

Plants in pots were most profusely supplied, and formed a rich back ground to the exhibition tables. Among the most liberal contributors of these, were Messrs. Caleb Cope, James Dundas, and Gen. Patterson, among the amateurs; and Messrs. Buist, Ritchie and Dick, Dreer, Landreth and Fulton, and several others, among the professional gardeners. The *Roses* of Mr. Buist, comprising a collection of Perpetuals, Bourbons, Bengals, Tea, etc., of great beauty, and the superb *Dahlias* of Mr. Jared Schmitz, excited universal admiration. A tasteful *Urn*, formed entirely of indigenous flowers by Mr. Caie, was also much admired.

Among the fruits, the specimens of foreign grapes were especially remarkable. The finest bunches, raised under glass, to which the premium was awarded, were those grown by Wm. Westcott, gardener to Mr. Copperthwait; among those raised without heat, the best were grown by John Dougherty at Laurel Hill, and in the open air, Black Hamburg by S. Middleton, Darby. Very superb specimens were also exhibited by Messrs. J. Copperthwaite, G. W. Carpenter, Alexander Parker, J. Snyder, Jr., William Johns, Caleb Cope, James Dundas, G. W. Smith, John Naglee, J. B. Baxter,

Lewis Craft, R. Carr, John Sherwood, and several others.

The "observed of all observers," was an immense cluster of Cyprian Grapes, sent by G. Copperthwaite. It was pronounced by the committee the largest bunch ever exhibited before the Society, and a special premium of \$10 was awarded for it. Some clusters of "La Reine de Nice" grapes contributed by F. N. Bodine, were also unusually fine.

There were about forty contributors of pears. The largest variety was shown by J. Rutter of Chester county, who contributed thirty named sorts. Mr. Hays of Newark showed quite a large number of well grown varieties.

Geo. P. Deacon, of Burlington, N. J., showed thirty-eight varieties of apples, well grown. The contributors of fine Peaches were so exceedingly numerous that we must refer the reader for names to the official report of the exhibition, which we shall publish.

The arrangement of the large table in the upper saloon was handsome and effective. It was surrounded with fanciful wreaths or festoons of vines, woven into tasteful forms. At either end of the table was a magnificent cornucopia—well executed floral designs by Peter Rabbe: one overflowing with a profusion of the fruits of the season, the other abounding with every species of vegetable. The remainder of the table was crowded with the treasures of Pomona.

The space allotted to vegetables was most abundantly filled. Every culinary vegetable of the season was exhibited, many of them grown to very great perfection. The largest contributor in this department was Anthony Felten, whose collection, in quantity, excellence and variety, made almost an exhibition of itself.

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NEW-YORK STATE AGRICULTURAL SOCIETY.—*Horticultural Department.*—The building, erected for the occasion, for the exhibition of horticultural productions, was 150 feet long by 50 feet wide, and was built in the Grecian style of architecture. Its entire front, with its portico, was densely clothed with evergreens. The light was admitted to the interior through a line of broad openings on each side above, covered with light muslin. This hall was far superior, in size and decoration, to any erected at previous fairs. The interior was magnificent. A smooth boarded floor, twenty-five feet wide, extended the whole length through the middle, and supported the double line of terraced shelves for the exhibition of flowers and fruit, leaving a smooth and spacious walk on either side within the railing. At the centre, this line of shelves was interrupted by a fine evergreen gothic temple, 22 feet high, standing on a base 10 feet square. The softened light from above, upon the massive wreaths and green columns throughout the hall, added much to its imposing appearance. This hall was designed by Dr. ALEX. THOMPSON of Aurora, N. Y.

The exhibition of flowers was fine for the season, though there were but few of much rarity. A fine collection of Dahlias and Verbenas was exhibited by James Wilson of Albany; Ellwanger &

Barry of Rochester, presented 25 select varieties of Dahlias, and 12 species and varieties of Verbenas; they also exhibited 28 varieties of roses, principally Bourbons, Noisettes, Bengals, and Hybrid Perpetuals: the Princess Clementine, Bourbon—Souvenir de la Malmaison, Tea—and Augustine Mouchelet, hybrid perpetual—were among the number. There were a large number of flowers, of different degrees of beauty and variety, in bouquets and masses, from various contributors, among whom were Professor Jackson of Schenectady, E. T. Throop Martin of Owasco, L. Menard of Albany, Edward Thomas of Geneva, Elisha Taylor of Buffalo, Henry Morgan of Aurora, and others.

A large number of cultivators exhibited considerable collections of fine fruits, though some of the best fruit gardens in the state were not represented. Ellwanger & Barry of Rochester, presented 12 varieties of peaches, 40 of apples, and 60 of pears; B. Hodge of Buffalo, an extensive miscellaneous collection of fruits; large collections were also on the tables from Bissel & Hooker, Rochester; Charles Powis, Greece, Monroe county; E. C. Frost, Catherine, Chemung county; A. Bryant & Son, Buffalo; Wm. Webb of —; and — Allen of Oswego. A. V. Pulsifer of Auburn presented a single branch of the Isabella Grape of last season's growth, 21 feet long, sustaining 81 pounds of grapes, some of the bunches being about eight inches in length. This good crop was owing to a thorough and judicious system of pruning. Very fine specimens of Crawford's Early Peach, a little out of season, were presented by T. G. Yeomans of Walworth, Wayne county. H. H. Coit of Northern Ohio, presented a fine and select collection, containing several specimens of uncommon beauty and size, among which were those of the Alexander apple, about five inches in diameter. There were a large number of smaller collections, some of them with very fine specimens, from various other sources.

Some of the principal varieties noticed, were the following, which were found in a greater or less number of the different collections:—*Apples*, Rhode Island Greening, Ribston Pippin, Black Gillyflower, Roxbury Russet, English Russet, Newtown Pippin, Lady Apple, Gravenstein, Late Strawberry, Baldwin, Esopus Spitzenbergh, Yellow Bellflower, Fameuse, St. Lawrence, Seek-no-further, Fall Pippin, Red Canada, Vandevere, Jonathan, Summer Pearmain, Tallman Sweeting, Hubbardston Nonsuch, Swaar, &c. This list will indicate most of the best standard varieties, which are now considerably cultivated in Western New-York, and it could have been much lengthened by the addition of those of second or third rate value, or of local character. Among the *Pears*, were Stevens' Genesee, Bartlett, Brown Beurre, Seckel, Wurttemberg, Capiamont, Winter Nelis, Easter Beurre, Gansel's Bergamot, Beurre Diel, Napoleon, Passe Colmar, St. Ghislain, Virgalieu, Louise Bonne of Jersey, &c. The season for *Peaches* had nearly passed; the following were found, more or less, in the several collections: Old Mixon Cling, Old Mixon Free, President, Lemon Cling, Red Cheek, Malacoton, Jacques' Rareripe, Crawford's Early, and Blood Cling. Many of the collections had Isa-

bella, Catawba, Burgundy, Sweetwater, and others of the most commonly cultivated grapes interspersed through them.

It was much to be regretted that this magnificent and costly building was not better filled; and that only *twenty-four* dollars in cash, and three silver medals, besides books and diplomas, constituted the whole of the premiums offered on horticulture, among an aggregate number amounting to three thousand dollars, while there are many farmers in Western New-York, who make more money by selling fruit, than from all other crops together. *J. J. T. Macedon, Wayne Co.*

BUFFALO HORTICULTURAL SOCIETY.—At a meeting of the Buffalo Horticultural Society, held on Wednesday, August 26, 1846, it was unanimously

Resolved, That this Society welcome with great satisfaction the appearance of "The Horticulturist," edited by A. J. Downing, under whose capable and efficient management, it most confidently anticipates a most useful and honorable career, in reforming, as well as improving, the rural taste of our land. With entire confidence in the ability of the work, we commend it to the attention and patronage of the public.

Resolved, That this Society adopt the authority of Mr. Downing in his "Fruit and Fruit Trees of America," as their standard in the classification and nomenclature of their fruits.

Resolved, That the reports of the several exhibitions of this Society be transmitted to the Editor of the Horticulturist for publication.

LEWIS F. ALLEN, *Pres't.*

C. F. THOMAS, *Sec.*

Report of the August Exhibition.—The Committee to whom was appointed the duty of examining the fruits and vegetables of the August exhibition, beg leave respectfully to make the following report:

It is with unfeigned pleasure that your committee have examined the numerous specimens of rich and peculiarly fine fruits. Pomona indeed lavished, on this occasion, a fair share of her treasure among us. Our principal table for fruit, twenty-four feet long, by five feet wide, was greatly crowded with the profuseness of the various exhibitors. Cheek by jowl, each vying with the other, were the splendid Morrison's Round Peach with the Washington Plum, the Moorpark Apricot, and the Golden Chasselas Grape, the Pound Sweeting Apple, and the Beurre Spence(?) Pear—all specimens of unusual size and beauty.

We cannot refrain, at this time, from congratulating our fellow-citizens upon the rapid improvement in our horticultural products, and the progress of taste and skill evinced in their cultivation.

Our thanks are particularly due to our professional friends and gardeners, the Messrs. BRYANT, COL. HODGE, MR. W. WELSH, and MR. ELIN TYLER, for their spirited efforts, in the importation of new and valuable varieties of fruits and plants. Many varieties of fruit are in bearing for the first time here; and the speedy accumulation of the choicest kinds, with an extended effort at grape cultivation, will, under the fostering care of our

Society, soon make the neighborhood of Buffalo noted for its horticultural productions.

Plums.—The variety of plums exhibited was large, and the specimens in fine order.

Washington—of this plum there were some specimens exhibited by Mrs. Shumway and Mrs. Haywood, of uncommon size and beauty; among other kinds, we notice Red Magnum Bonum—sixteen specimens, very large and fine, and giving indisputable evidence of good culture; Yellow Gage, Prince's Yellow Gage, Green Gage, Bleeker's Gage, Purple Gage, Imperial Gage, French Prune,—all the foregoing were very choice specimens; Smith's Orleans—very large and fine, showing fine culture, one weighed near three ounces; Goliah, Mammoth Blue—very fine; Blue Damson, Huling's Superb.

Peaches.—New Seedling, York or Russet, Morrison's Pound, Yellow Rareripe, Alberge, Red Rareripe—all fine, and some of very large size.

Apricots.—Moorpark from Mr. Webb and Col. Hodges, both very fine.

Figs.—Brown Ischia Figs from Mr. Webb, ripe and admirably grown.

Grapes.—Golden Chasselas, Black Hamburg, White Sweetwater, Miller's Burgundy—ripe, rich and luscious, well grown.

Pears.—Many excellent specimens of Stevens' Genesee, Beurre Spence, Brown Beurre, Summer Belle, White Roi d'Eté, Seckel, Orange Bergamot, Vert Souque, Epine Rose, Louise, Bonne de Jersey, Newtown Virgouleuse, Autumn Superb, Julienne, Napoleon, Autumn, Patroon, Washington, Marie Louise, and Pound Pear.

Apples.—Sweet Bough, Hawthornden, Red and Green Sweeting, Pound Sweeting, Summer Codlin, August Tart, Orange Sweet, Peach Apple, American Nonpareil, Corpendue, Golden Rennet, Emperor Alexander, Drap d'Or, Indian Rareripe, Oslin, Summer Rose, Large Yellow Bough, Early Joe, Red Astrachan, Sine Qua Non, Tart Bough, White Juneating, Strawberry Pippin, Nonsuch Pippin, Summer Queen, three new seedlings, Detroit Red, Williams' Favorite, Sugar Sweeting, Golden Sweet, Yellow Harvest, Summer Sweeting, Pomme de St. Jean, Red Juneating, French Codlin, Sweet Pippin, Early Nonpareil, Early Strawberry, Dwarf Paradise, Sapon, Pearmain, Keswick Codlin, Root's Early, Granny Sweeting, Summer Green, Maiden's Blush.

The number of specimens of each was liberal, and the fruit of each variety large and fine. Very many were of peculiarly fine growth, and rich in bloom. Your committee look upon the exhibition as in quantity and quality highly gratifying, and they doubt much if the show of fruit, for August, could be excelled by that of any society of like kind in this state.

All which is respectfully submitted.

W. R. COPPOCK,
WM. W. MANN.

Buffalo, Aug. 27, 1846.

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STODDARD'S ALPINE STRAWBERRY.—We have now lying on our table, four letters, including one from Mr. Prince of Flushing, and Mr. Elliott of Cleveland, relating to the character of this new

Alpine strawberry. The writers give their testimony against this variety, and assert that it is no better, if it is not identically the same as the old Alpine.

There appears to be but little doubt in the minds of all who have possession of this sort, that much of the high reputation which it obtained last season was owing to the circumstances under which the original bed was grown by Mr. Stoddard. The soil was one of unusual depth and fertility, and the fruit was, consequently, extraordinarily large and abundant. Still we think all the opinions yet advanced by the present growers of this variety are somewhat premature. Suppose, for example, any new Pine strawberry had been received from England just a year, or perhaps only six months ago, (the time that Stoddard's Seedling has "been out,") would not those importing it, cultivate till at least the second season, before pronouncing on its merits? Certainly we think so; and we do not know why Stoddard's Alpine should not be allowed the same time to establish itself, and prove its qualities, before a verdict is pronounced against it.

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WHAT IS THE BEST PEACH?—We incline to the opinion, that the best peach for this latitude, taking into account *all* the desirable qualities for standard garden culture, is the GEORGE IV. This most excellent sort, though it bears a royal name, is a native of New-York, and is perfectly adapted to this climate. It is large, very handsome, and exceedingly high flavored. The tree is remarkably healthy. But what we look upon as its crowning merit, is its *bearing habit*. Nearly all our peach trees, in the easy careless culture of our gardens and orchards, are ruined by excessive overbearing. Not one person in ten ever thinks it worth his while to thin out the fruit of a peach tree, when that fruit is half grown, and the consequence is that the fruit attains only half the size and flavor that it otherwise would, and the tree itself is injured by the overcrop.

Now the George IV. has the excellent habit of bearing *just enough* fruit. That is, it presents the appearance when the fruit is half grown, when compared with most other sorts, of only half a crop. But when the fruit is fully grown, every specimen is large, ripens finely, and is of the most delicious flavor, while the quantity at last proves abundant. This renders the tree a regular bearer, and adds greatly to its longevity.

Among early peaches, we are inclined to believe the true *Early York* not surpassed, if it is equalled, by any other very early fruit. We allude to the *Early York* of our work on Fruits, a variety with *serrated* leaves, quite distinct from, and, we think, superior to the peach known by this name in New-Jersey. For all localities south as well as north, we now think it decidedly superior to the *Early Tiltonson*, a fine fruit, but which is comparatively a slow grower, and we find ripens about the same season.

The fairest and most excellent of the white peaches, is the Snow Peach, which deserves its name, as well as a place in every good garden.—Ed.

TWO NEW SEEDLING PLUMS FROM MAINE.—We have been favored with specimens, by express, of two new seedling Plums from Maine, by B. F. NOURSE, Esq., of Bangor. Mr. Nourse has also furnished us with a description of these new fruits, which we here append. Col. Henry Little, of Bangor, has also, we learn, presented specimens at one of the recent weekly exhibitions of the Horticultural Society of Massachusetts.

The specimens came to us in very good order.

The *McLaughlin*, we should consider a very excellent fruit—perhaps a fruit of the first rank. It is not unlike in form to the Purple Gage, and has a rich high flavor. The *Penobscot* we think, so far as we could judge from the specimens we received, is only a second rate fruit, though large and handsome. It resembles in appearance Prince's Yellow Gage, but it is a clingstone. We give an outline of the *McLaughlin*, taken from the fruit. No doubt both these varieties will be valuable for their great hardness in all northern localities. The following are Mr. Nourse's descriptions.—Ed.

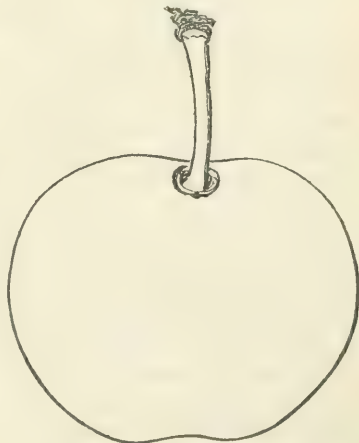


Fig. 51. The *McLaughlin* Plum.

The *McLaughlin* Plum was raised by James McLaughlin, Esq., of Bangor, Maine, and first fruited about three or four years ago; since when the original tree has been a regular and good bearer. Grown in light sandy loam, it remains to be seen if it will improve or deteriorate in heavier soil.

The tree is of rapid growth, making stout vigorous shoots of four to six feet in a season. Top is round, low, spreading, and, as its grower says, "it makes a regular apple-tree top." Leaves long, broad and glossy. Bark smooth and clean—and on the new shoots dark.

Fruit above medium size, nearly round, but flattened at either end more than any plum described in your "Fruits and Fruit Trees," being of greater breadth than length. Suture obscure. Stalk about three-fourths of an inch long, inserted in a small cavity, [without depression—Ed.] Skin thin and tender, (russet) yellow, sprinkled with a red tinge which deepens to a purplish hue around the stalk,

where there is considerable bloom. Flesh dull yellow, juicy, rather firm, very sweet, and of luscious flavor. [It adheres to the stone, which is roundish in figure.—Ed.] Surpassing all varieties that have yet fruited here. Ripens last of August.

The *Paradise Plum* was also raised by James McLaughlin, Esq., and though inferior to that bearing his name, is esteemed worthy of a place among good plums.

Like the McLaughlin, its original tree has borne but three or four years, is a good bearer, and was planted in same light soil. Its growth is also similar, though less inclined to branch horizontally.

Fruit large, oval, with distinct suture. Stalk three-fourths of an inch long, small and clean, inserted in a small cavity. Skin yellow, tinged with green, and when ripe slightly with red on the cheek, little bloom. Flesh yellow, sweet and rich, with pleasant flavor. [Stone long, and pointed at both ends; flesh adheres to.—Ed.] Ripens about 5th to 10th of September at Bangor. Very respectfully. B. F. Nourse. Bangor, Sept. 4, 1846.

THE LYMAN DONATION.—The Hon. THEODORE LYMAN, of Boston, has just made the handsome donation of one thousand dollars to the funds of the Massachusetts Horticultural Society.

This is the third gift of the like amount, which the Society has received during the present year. The income of these donations previously received, it has been decided, shall be distributed annually in the form of medals, as prizes—the APPLETON and LOWELL medals; and we presume, we may now add the LYMAN medals.

There is probably no society devoted to the art of culture in the Union, whose influence is so usefully and widely felt as that of Massachusetts. The great and praiseworthy interest which is felt in its prosperity by every one in Boston, from the humblest grower of salads to those occupying the highest position in society, explains very readily the cause of its large activity, and the zeal with which its affairs are conducted.

CLOTH OF GOLD ROSE.—To the defective character of this rose, as given in the September number of the Horticulturist, there must be some exceptions. I have just seen several specimens in the nursery of Mr. James Wilson of this city, in full bloom. The flowers were very full, of a rather deep creamy yellow, yellowest in the centre, and of a handsome cup shape. When compared with its twin sister, the Solferino, which was growing close by, the Cloth of Gold was seen to be much superior in size and shape. I compared it with the Ophir also, and it proved much superior in size, and more double. Mr. W. informed me the plants which I saw were budded last summer, potted in a dormant state last fall, kept in the greenhouse all winter, and set out in the open ground about June, after having made some growth in the pot. These plants had made good sized shoots, say from 18 to 30 inches, each shoot having quite a number of buds on it; thus showing that quite a long succession of flowers might be expected. Mr. Wilson thinks, that as far as his experience goes, and it is now three or four years since he imported it from

the establishment of Mr. Rivers, at Sawbridge-worth, England, that it quite answers the description of it as given by Rivers himself.

I also saw, when there, some magnificent specimens of that finest of the Convolvulus family, the *Ipomœa learii*. It had grown on strings attached to an out-building, nearly twenty feet high, and was perfectly covered with its very large, trumpet shaped purplish-azure blossoms, beautiful as

“—that blue flower which beatitudes say,
Blooms nowhere but in Paradise.”

I think it the finest climber I ever saw. Sanford Howard. Albany, Sept. 2, 1846.

The remarks of your Philadelphia correspondent on the habits of this rose, correspond with my own experience here. I have cultivated this new variety for two seasons, and have not yet had a single blossom. C. W. Elliot. Cincinnati, Ohio, September 1st, 1846.

This rose, I agree with you in opinion, is a rather shy bloomer. When budded on a free-growing stock, it gives a pretty good bloom once, but afterwards blooms but seldom. The color is a pale yellow, and not a good deep yellow (like Harrison's,) as I had supposed. So much for additional testimony for this region. Near Natchez, I have seen it really blooming well, but never at the north. Yours. James Wardrop. Pittsburgh.

[It is no doubt true that this new yellow rose only blooms freely in strong, damp soils, and in a cool situation. Wherever we hear of it grown on dry soils, it would appear to be rather an indifferent bloomer.—Ed.]

THE TWO HARDEST AND MOST PROFITABLE APPLES.—What are the two hardest and most profitable apples? I am about to plant an orchard on soil which is not very favorable, and not in the best exposure. I would be much obliged, if you would give me the names of two or three sorts best suited to such a situation. Yours sincerely, J. H. B. New-Jersey.

ANSWER.—Baldwin and Rhode-Island Greening. No two varieties of apples—fruits of the highest excellence, too—are so hardy, uniformly productive, and profitable in all soils and situations, as these. We have noticed both of them this season, in orchards in various parts of the country, where other sorts, often productive, have almost entirely failed, and yet these are giving abundant crops of large, fair fruit. We doubt if any better market sorts, all points considered, can be found for soils of medium quality.—Ed.

THE GRAVENSTEIN AND THE PORTER APPLES.—For the month of September, I esteem these the two best apples. Both of them bear as finely as I could wish. The Gravenstein is a large, admirably formed fruit, of just that mixture of sweet and acid that is most agreeable. The Porter Apple is as handsome as an orange, though its color, when quite matured, is more like that of a lemon. Like almost all our best native fruits, it is fair and smooth, and its products heavy. In market it commands the best price. Yours. A. S. New-York, Sept. 10th, 1846.

GIGANTIC QUINCE TREE.—While in the neighborhood of Geneva this season, our attention was called to a specimen of the common quince tree, which is larger than any that we have ever heard of. Mr. HILDRETH, of that place, has since very carefully measured it, at our request. Its trunk is two feet in diameter, or has a girth of six feet. It is about thirty feet high, and has a very vigorous and luxuriant head, the branches extending over a circle seventy-five feet in circumference. It bears very large crops of the variety known as the *Pear Quince*. It is situated in deep rich soil, on the land of Mr. DUTTON of Seneca, and, we understand, was planted about forty years ago.

The Quince is generally looked upon as a mere bush or large shrub, and it owes this dwarfish habit, which it usually assumes, chiefly to the wretched treatment it receives. No tree, as this specimen fully proves, better repays its owner for *deep, rich* soil. The poor and wet situations, where it is generally forced to grow, are the worst possible ones for it.

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LABELS FOR FRUIT TREES.—I have seen in our agricultural and horticultural periodicals many directions for making labels for fruit and other trees, none of which are as simple and cheap as this:

Take a strip of sheet tin of any size you may choose; the most convenient is about three inches by three-fourths of an inch, and write the name etc., thereon with a sharp awl, *being careful to cut through the tin coating*. The letters will soon oxidize so as to be read as easily as ordinary printing, and the label remains thenceforth unchanged. In suspending from the tree, either make two holes, or twist your wire tight, else the tin may cut it off if allowed to work in the loop. J. W. B. Rochester.

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NOTES ON PEARS AND APPLES ABROAD.—From an interesting letter, with which we have been favored by an amateur in Baltimore, we make the following interesting extract:

"Did I mention a pear I met with in Rome, during the latter end of March and first of April?—a large, pyriform, juicy fruit, of an excellent, though not very high flavor. I could learn nothing farther of it than that it was called 'Spadano.' It was a fine fruit for one so late. When in Paris, at the end of September, the *Napoleon*, the same as I have fruited here for three years, was one of the principal pears in season: it is juicy, but not high flavored. At the same period the *Marie Louise* was in eating, a very fine juicy fruit. This is considered the best November pear in London. At the above period, there was also, in Paris, the *Duchess d'Angoulême*, and the *Brown Beurré*; but the pear preferred above all others was the *White Doyenné*, far excelling some dozen varieties then in season, both in beauty and quality.

"I was told in England, by gardeners and fruiters, that the *Seckel* was the best flavored pear known, but that it would not keep in their climate.

"The finer sorts of American apples are superior to the best of the English varieties. The *Ribston Pippin*, one of their very best, is a pleasant apple, but wants the American characteristics, juiciness and crispness. The *Blenheim Orange*, another celebrated fruit, wants acidity; the *Haw-*

thornden is good, but rather acid; the *Red Astrachan* is a fine flavored fruit, and is for sale in Covent Garden Market at the end of July. Among their other apples, I found the *Emperor Alexander* well flavored, but tough; the *Nonpareil* the same, but too dry; *Courpendu*, good flavor, but tough and dry. The finest apple I met with in Europe was the *White Colville*, at Paris, in January—the size full medium; form remarkably *ribbed*; color pale bright yellow, a handsome and tender fruit, juicy and of a pleasant acid flavor, but not high.

"In eating the *Newtown Pippin* in London, imported from the United States, (where the demand is so great that a market may be made for thousands of barrels) one cannot but be struck with its superiority over all English apples—a fact fully admitted by all Englishmen themselves. This fruit costs there about \$10 per barrel, and is retailed for five to seven cents each. In several towns in Ireland, I have noticed native apples labelled 'American,' to ensure a ready sale." W. Baltimore, Md., Sept. 10, 1846.

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THE MOST RAPID GROWING MAPLE.—How many persons, undertaking to improve new and bare places, are at a loss for what trees to plant for immediate effect! "Something which will grow fast," is to them the great desideratum of life. To talk to such persons about steady and slow growing trees—beeches and oaks—is like talking to the manager of the electric telegraph about the advantages of the old fashioned mail coaches.

We must have the pleasure of recommending to such persons that excellent tree, the Silver Maple, *Acer eriocarpum*. It is, we believe, to be had in all the large nurseries, though indigenous here and there, it is seldom planted as an ornamental tree north of New-Jersey. It is a large and handsome tree, with leaves as large as those of the Sugar Maple, but more delicately formed, and with a silvery or downy under surface.

But the *habit* of the tree is quite distinct from the other maples. When it has once formed a head, its branches begin to decline or droop slightly, with just enough of a sweep to be graceful, but not sufficient to amount to a *weeping* wood. In short, with its pleasing habit, clean foliage, and smooth bark, it is one of the most agreeable of trees.

As regards its rapidity of growth, it is quite remarkable. We do not know any fairer wooded tree, except the Elm and the Abele, which sooner throws a fine shade. As compared with the Sugar Maple, its growth is double. In five years it really makes a fine large head. And as a recommendation of still greater importance, we may add that it will thrive in almost any tolerable soil, from a light sand to a strong clay loam.

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SALT AS A MANURE.—J. M. Ives, at page 132, says he applied five hogsheds of salt to the acre—but I wish to know if he meant an English hogsh-head of 63 gallons? or a butt, which, according to N. Webster, is called a hogsh-head in America, though it contains from 110 to 120 gallons? I would thank him to say how many pounds, or how many bushels of salt he applied to the acre. X.

DESTROYING INSECTS.—This season, insects have been unusually destructive to our finer fruits. The Wasp, the Yellow Hornet, the Bee, the Snapping Bug and Ants, have all been busy in breaking through the skin, and causing a premature decay—in some cases before the fruit was ripe. At least one-half of our apricots rotted in consequence of these attacks, and many of our finest peaches. A continued buzz was heard in the trees; and what to do became the question. Every wasp nest that we could find was destroyed, together with the *builders*, so that a very sensible diminution in their numbers was observable; but still there were many left to crowd in with the other insects; and I thought of the plan, long since adopted by English gardeners, which was to hang phials filled with sweetened water among the branches. This plan has proved very successful; and if I had adopted it early in the season, much fine fruit might have been saved. May we all remember it next year. *D. Thomas. Cayuga co., 9 mo 13, 1846.*

HOW TO CARVE A WATER MELON.—Cut off the ends, and lay them aside; then if the fruit is long, divide it into two parts, by another cross section. Set the part or parts on end, and pass the knife perpendicularly downwards several times, till the pieces are an inch and a half or two inches broad across the rind. In this manner the seeds are easily removed, and the pieces of a convenient shape. *R. Cayuga.*

PITY THE TOWN TREES.—The anomalies attendant upon the growth of trees in large cities, might serve for a theme whereon to write a volume. They are placed in a hole quite too small for them, a little rubbish is thrown about their roots, the bricks are laid carefully as tight and near the root as possible, and the curbstone touches the rootlets at least on one side. To prevent the rain from ever reaching the roots, the tree is now enclosed in a box, and this tender vegetable production is expected to grow! Sometimes this is the case, but more generally, as nobody ever thinks of watering it, it dwindles and dies. The wonder is that any city tree ever survives the treatment.

Care should be taken, in the first place, to have the whole large and deep; and to this should be brought, before the tree is procured, cart loads of the best soil that can be got; then plant carefully in the usual manner, leaving the paving as far from

the stem as propriety will admit. If the watering pot is now judiciously used when the weather is dry, and sufficient ventilation is given in the sides of the tree box, the probability is that a shade tree will be produced.

It is a melancholy circumstance that evergreen trees, as a rule, will not succeed in large cities, else we might have much more ornamental planting than we now have. Deciduous trees, resembling evergreens, may be advantageously substituted, and among these the Cypress and the Larch are probably the best. The Cypress is late in producing its leaves, and may be said to be a clean tree, though not as good for shade as some others. Probably we shall have a good, and certainly a quick-growing tree in the *Paulownia imperialis*. It will be useful the first season, and the second or third, will attain all the height required; after which it may be trimmed to suit the wishes of the owner.

The trimming of the successful trees in the streets and in public squares in cities, is another subject deserving of comment. Every erroneous experiment is tried upon them, to distort and disfigure their naturally graceful forms. The principal object seems to be to endeavor to force them to a great height, by denuding them of their lower limbs, than which nothing could be more preposterous and injurious. Even the beautiful Cypress in Washington square has undergone this shocking operation the present season, and it now looks like a scarecrow on stilts. *City fathers*, who know less of trees than of yard sticks, would do well to employ a little science in this matter, rather than injure for posterity the beautiful works of nature. They might also very advantageously ask of experience the best kind of trees for planting. *Philadelphia.*

LIMA BEANS DRIED.—Are all your readers aware that Lima beans may be made a vegetable for "all winter's use?" Gathered just at the time when they are fit to pull for the table, and dried on the floor of an airy loft, they will keep for many months. Before using them, you need only soak them in water for twelve hours (say from the previous evening till the morning they are wanted.) Then boil them, and serve them as if they were fresh. They are not a whit inferior to fresh ones, or at least you are willing to admit it in mid-winter. *A. S. New-York.*

MASSACHUSETTS HORTICULTURAL SOCIETY.

MASSACHUSETTS HORTICULTURAL HALL. }
Boston. August 29, 1846.

The President read the following letter from the Hon. Theodore Lyman:

"SIR—I beg to hand enclosed a check for a thousand dollars, payable to your order. I have only to request that this sum may be invested in a permanent manner, and the proceeds of the investment be appropriated in the shape of prizes for the encouragement of the growth of such kind or kinds of fruit as the government of the Horticultural Society may deem advisable to select. I am, sir, your obedient servt.

"THEODORE LYMAN.

"TO MARSHALL P. WILDER, ESQ.,

President of the Mass. Hort. Society.

"Brookline, Aug. 26, 1846."

Voted. That the thanks of this Institution be tendered to the Hon. Theodore Lyman, for his munificent donation of one thousand dollars.

Voted. That the Society entertain the highest respect for the liberality that prompted so substantial a token of interest in its welfare.

Voted. That this donation be permanently invested by the Finance Committee; that it take the name of the LYMAN FUND; and that the income be distributed in medals or plate, as the Society may direct.

Voted. That the Recording Secretary transmit a copy of the foregoing votes to Mr. Lyman.

Voted. That the Committee of Arrangements have power to increase their number.

Hon. Theodore Lyman, Brookline, elected honorary member; Walter Farnsworth, Roxbury, elected a member

Exhibition of Saturday, Sept. 5th, 1846.

FLOWERS.—From M. P. Wilder, President of the Society, fine Dahlias.

From O. H. Mather, a plant of *Buddleia lindleyana*, and one bouquet.

From J. L. L. F. Warren, *Phlox breckii*, (fine specimens.) White Water Lilies, *Lilium longiflorum*. Zinnias, and other cut flowers; two large and ten small bouquets; also three plants of *Amaryllis belladonna*.

From William Kenrick, by Miss Russell, one large and two small bouquets, basket of flowers, and cut flowers.

From Joseph Breck and Co., *Phlox breckii*, *wilderii*, a fine white seedling of W. E. Carter, and other varieties, *Lobelia syphilitica*, *Altheas*, Zinnias, Double Balsams, fine Double Imperial Pinks, Verbenas, Sweet Peas, Dahlias, with a variety of other cut flowers.

From Parker Barnes, Dahlias, Verbenas, Roses, Zinnias, *Salvia splendens*, Sweet Peas, Asters, *Phlox drummondii*, *Erythrina crista-galli*, (a fine specimen,) Double Sun-flower, &c.

From T. H. Perkins, by W. Quant, fine Asters, Dahlias, *Phlox Drummondii*, Zinnias, Marigolds, a fine specimen of *Melastoma malabathrica*, *Tecoma jasminoides*, and other fine cut flowers.

From H. W. Dutton, Dahlias, Zinnias, Asters, and other cut flowers.

From Hovey & Co., fine Roses, *Altheas*, and four bouquets.

From G. C. Crowninshield, by Jeremiah McCarty, fine German Asters.

From John Hovey, Dahlias, Asters, two bouquets, and two plants of *Valloia purpurea*; and a beautiful flower of the *Amaryllis* tribe.

From William Meller, forty-six varieties of Dahlias, two bouquets, and cut flowers in variety.

From Thomas Mason, Dahlias.

From W. B. Richards, twenty-two varieties of Dahlias, *Commelina celestis*, *Salvia splendens*, &c.

From R. West, Salem, by J. Sheehan, one pyramidal bouquet or design, and a fine bloom of *Cactus triangularis*.

From John A. Lowell, by Wm. Doyle, a curious and beautiful air-plant, *Stanhopea oculata*, *Zygopetalum maxillare*, a rare orchideous plant, and one large pyramidal design or bouquet.

From J. W. Mandel, one large pyramidal design or bouquet, Dahlias and Asters.

From James Nugent, fine Dahlias, Ferrarias, &c.

The Committee report the following Dahlias in the different stands as being very fine:

M. P. Wilder, Cleopatra, yellow, new; Tassot's Indispensable White; Constantia, white edged with cherry; Arethusa, fine purple, new; Ithuriel, lilac, dove and orange, shaded; Isis, bronze tipped with white, colors variable in different flowers, fine fancy flower.

J. Breck & Co., Vanguard, crimson, new; Optimus, fine blush white, new; Arethusa, fine purple, new; Cleopatra and Tassot's Indispensable.

Parker Barnes, Prince's Olive, fine white; Beauty of Sussex, white with a deep edge of cherry; Essex Champion, fine orange scarlet; Nonpareil, dark scarlet; Antagonist, white; Bridesmaid, white tipped with purple.

H. W. Dutton, Girdling's Prince of Wales, purple shaded with crimson; Viscountess Resigneur, purple tipped with white, new.

J. L. L. F. Warren, Great Mogul, crimson; Tassot's Indispensable; Rembrandt, purple; Constantia; Competitor (Girdling's) crimson; Pactole, yellow, new; Viscountess Resigneur.

W. Quant, Antagonist, Lady St. Maur, and Royal Sovereign, yellow, new.

W. B. Richards, Dodd's Prince of Wales, yellow; Standard of Perfection, purple; Col. Baker, purple.

William Meller, Antagonist, Lady St. Maur, La Leon, scarlet tipped with white; Northern Beauty.

John Parker, Model, purple; Dodd's Prince of Wales; Pickwick, and Ne Plus Ultra.

James Nugent, Cleopatra, Standard of Perfection and Constantia.

John Hovey, Marshal Soult and Dodd's Prince of Wales.

J. W. Mandel, Dowager Lady Cooper, Beauty of Sussex, and Standard of Perfection.

AWARD OF PREMIUMS.

Parker Barnes, H. W. Dutton and James Nugent, judges. First premium to Miss Russell, for best bouquet, \$2; second premium to J. L. L. F. Warren for next best bouquet, \$1.

Gratuities. To William Doyle, \$2, for a beautiful air-plant, *Stanhopea oculata*, and \$1 for pyramidal design or bouquet. To J. W. Mandel, \$1 for pyramidal design or bouquet. To R. West, \$1 for pyramidal design or bouquet.

For the Committee, Jos. Breck, Ch'n.

FRUITS.—J. S. Sleeper, Pears—Harvard, fine.

A. D. Williams, Apples—Porter, fine, Russet Sweet, Fall Sopsavine and Red Apple; Pears—Harrison Fall Baking, Juliette, Williams' Seedling, Cushing's Dryanna.

J. C. Cabot, Esq. Salem, Pears—Passans de Portugal, Summer Franc Real, Hessel, Honey, Dearborn's Seedling, all fine.

J. Fisk Allen, Pears—Passans de Portugal, Cabot, Dearborn's Seedling, Summer Franc Real, fine; Peaches—Crawford's Early, Noblesse, Coolidge's Favorite; Plums—Green Gages, fine; Grapes, Zinfandel, Ferral, White Frontignan, Black Hamburg, Wilmot's No. 16, Syrian, Esperione.

Josiah Lovett, Beverly, Melons—Christiana, Green-fleshed, Green and Yellow, and other varieties; Pear, Musk, Bou Chretien d'Ete.

George Walsh, Williams' Bon Chretien Pears, Lady Blush Apples, and Green Gage Plums.

James Nugent, William's Bon Chretien Pears.

Messrs. Hovey & Co., Grapes—Black Prince, Alicant, White Frontignan, Chasselas of Fontainebleau, Wilmot's Black Hamburg, fine, Black Hamburg, Black Hamburg, (?) Maccready's Early White, Grizzly Frontignan, Pimston White Cluster; Pears—Jalousie de Fontenay Veudee, good quality, Bezi Veteran; Seedling Peach.

J. L. L. F. Warren, Pears—Julienne, Dearborn's Seedling; Nectarines; Spanish Water Melon.

Parker Barnes, Peaches.

William Beebe, Springfield, Peaches.

Alexander Clark, South Framingham, Peaches, two specimens weighing ten and a half ounces each.

Samuel Poud, Pears—Jargonelle of the French, Williams' Bon Chretien, Fondante d'Automne, St. Ghislain, Grosse de Bruxelles, Surpasse Virgouleuse; Plums—Long Blue French, Isabella, Diamond.

G. Merriam, West Newtown, Peaches—Jacques, Rueripe, Hastings's, Coolidge's Favorite, and a variety without a name.

M. P. Wilder, Pears—Fondante d'Ete, Golden Beurre of Bilbao, Juliette, Fondante d'Automne, very fine, and Beurre d'Aumais.

O. H. Mather, by Thomas Needham, Grapes—Black Hamburg, Chasselas Musque, Black Frankendale, White Chasselas, White Constantia, (?) Black Lombardy (?) Red Apple.

Messrs. Winship, Plums—Downton Imperatrice, Duane's Purple, Smith's Orleans, Long Blue French, two kinds without name, Italian Prune, Yellow Magnum Bonum, Belle de Rheims, Lombard, Nectarine Plum, Diamond, Cloth of Gold, Bingham, (?) Huling's Superb, Coe's Golden Drop.

E. M. Richards, Cushing Pears and Seedling Peaches.

Samuel Walker, Roxbury, Pears—Fondante d'Automne, Marie Louise, Beurre de Capiement, Golden Beurre of Bilbao.

Henry Little, Bangor, Plums—McLaughlin, and Penobscot Seedlings by Joseph McLaughlin, Esq.

Olus Johnson, Esq., Pears—Julienne, Rousselet, Panache, Hericart, Epine d'Ete, St. Ghislain; Black Hamburg Grapes, and a Pear unknown.

William R. Austin, Dorchester, Summer Franc Real Pear, and Early Ann Peach.

A. W. Withington, Apples unknown.

H. C. Merriam, North Tewksbury, twenty-one varieties of Peaches.

Wood Apples, a new seedling variety from F. Glazier, Hallowell.

Presented by Hovey & Co., a good Apple for the season.

R. Manning, Pomological Garden, Salem, Tyson Pear, very fine flavor.

At the last exhibition some very fine Pears, of the kind called Manning's Elizabeth, were shown by Charles F. Patnam of Salem.

For the Committee, JOHN FISK ALLEN.

VEGETABLES.—From Mr. Williams, two Tomatoes weighing three pounds, and an Egg plant.

From A. D. Williams, Sweet Corn.

From Henry Mygatt, Farmington, Ct., some very fine Bell Peppers.

For the Committee, A. D. WILLIAMS, Ch'n.

Exhibition of Saturday, Sept. 12, 1846.

GERMAN ASTERS.—German Asters were exhibited by Messrs. Daniel Crowley, James Nugent, J. W. Mandel, Thomas Miles, Olin Johnson, William Quant, and Hovey & Co. Notwithstanding the very unfavorable season, (extreme hot weather,) many fine Asters were exhibited.

Also Dahlias, by Messrs Thomas Mason, Parker Barnes, and James Nugent.

Messrs. Dutton, McLellan, and Bowditch, were appointed judges to award the Society's premiums on German Asters, who, after a close examination of the several stands, awarded to Mr. W. Quant a premium of \$4, for the best display; to Messrs. Hovey & Co., a premium of \$3, for the second best; and to J. W. Mandel, for the third best display, a premium of \$2.

For the Committee.

JOSEPH BRECK, Clk.

FRUITS.—The President of the Society, M. P. Wilder, presented specimens of the Dunmore Pear. Also specimens from J. B. Chapin and J. J. Simpson, Esq., of Providence, R. I., of Knight's Seedling Pear, (large size, very sweet and melting,) and specimens of a pear resembling, if not, the Duchess d'Angouleme, but of which the Committee have some doubt, owing to the soft and melting character of the flesh and its sub-acid juice; other specimens (not so ripe) another season, with a sight of the leaf and wood, will probably remove our doubts.

N. Stetson, Bridgewater, seedling Peach, too ripe to enable the Committee to judge of its merits.

Messrs. Hovey and Co., seedling Peaches, medium size, color nearly white, with a slight tinge of crimson, of good flavor and worthy of cultivation.

F. W. Lincoln, of Canton, Red and Yellow Rareripe Peaches; also a seedling.

William G. Lewis, Roxbury, a dish of very large Peaches, highly colored, but of poor flavor.

Edward Winslow, Roxbury, four specimens of a seedling Peach.

Joseph Cushman, Plymouth, Grapes—Isabella, fine bunches and finely colored; also a dish of Nectarines; a dish of Plums, seedling; Peaches, seedling, and a variety name unknown.

Ben. Guild, Esq., Robinson Crusoe Peaches, and Beurre de Beaumont Pears.

James W. Sever, Dorchester, Rareripe Peaches of high and brisk flavor.

S. Pond, Cambridgeport, Grosse de Bruxelles Pear. (?)

Seedling Peaches from the farm of Col. Elijah Hale, Rock Bottom Village, Stow.

C. Harris, of Worcester, presented some specimens of a seedling Pear, raised by the Rev. Mr. Tracy of Sutton, supposed to be from a seedling tree grown in Connecticut; the specimens were overripe, but the Committee are of the opinion that it is not worthy of cultivation.

Leonard Cheney of Southbridge, by Charles R. Bond, seedling Peaches of fine flavor.

Alexander Clark, South Frammingham, a dish of fine Peaches.

George Meram, Newton, Royal Chag Peaches.

Bartlett Pears by James Nugent.

For the Committee.

S. WALKER, Clk.

PENNSYLVANIA HORTICULTURAL SOCIETY.

PHILADELPHIA, August, 12, 1846.

The stated meeting was held as usual, the President in the chair.

REPORTS OF STANDING COMMITTEES.

The Committee on Plants and Flowers awarded the premium for the most interesting collection of Plants in pots to William Hall, gardener to Caleb Cope. For the best collection of indigenous flowers, to Archibald Henderson, gardener to Wharton Chancellor. For the best bouquet, to the same. For the next best bouquet, to Anthony Felten; and for the best bouquet of indigenous flowers, to Archibald Henderson.

The Committee on Fruits awarded premiums as follows:—Peaches, for the best half peck, Albeige var., to Thomas Hancock; for the next best, to J. B. Baxter. Pears: for the best and next best, to Patrick Gallagher, gardener to Miss Gratz. Plums: for the best and next best, to Isaac B. Baxter. The following special premiums were also awarded: one of \$5 to William Westcott, gardener to J. Cowperthwaite, for four dishes of splendid Grapes. One of \$5 to William Hall, gardener to C. Cope, for ten dishes of very fine Grapes. One of \$2 to Benjamin Gullis, gardener to J. Snider, for Grapes; and one of \$1 to William Hall for fine Nectarines.

The Committee remarked, that they were gratified to find so rich a display in their department, surpassing in beauty and variety what they were led to expect on this occasion. And they call the attention of the Society to some new varieties of Grapes, presented by R. Buist, of remarkable size; also some dishes of Apples called the Hagloe, of surpassing beauty in appearance.

The Committee on Vegetables awarded the premiums for the best display, and for the next best display, to Anthony Felten; and also a special premium of \$1, for a fine display of vegetables deposited by Dr. Rivinus of Westchester, Pa., among which was a new variety of Squash, the seed of which was received from the Island of St. Croix, and is said to be superior in flavor to the common Squash.

A communication from the Secretary of the New-Haven County Horticultural Society was read, inviting a delegation to visit their annual fair, to be held on the 22d, 23d and 24th prox., which was referred to the Committee to superintend exhibitions, with power to act; subsequently the Committee resolved to accept the invitation, and appoint a deputation of five members.

Members elected.—Andrew H. Ernst, of Cincinnati, Ohio, to honorary and corresponding membership; Richard S. Field of Princeton, N. J., to honorary membership.

Presented.—For the Library, Vol. X. of the Farmer's Cabinet, by the Editor.

Objects exhibited.—Plants, by William Hall, gardener to C. Cope, a small choice collection. By Peter Raabe, a few fine plants. By Robert Buist, twenty kinds of cut flowers, of double German Stocks, and sixteen kinds of cut specimens of German Asters. By Archibald Henderson, a large collection of indigenous flowers, very interesting.

Bouquets, by Archibald Henderson, a beautiful basket and an indigenous bouquet. By Anthony Felten, a number.

Fruit.—By Thomas Hancock of Burlington, N. J., Peaches, Albeige or Yellow Rareripe and New-York Rareripe; Apples, Hagloe, Summer Pearmain, Maiden's Blush, Summer Queen, and Early Strawberry. Pears: Juliette; also from Dr. Rumsey's, Fishkill Landing, N. Y., some Cumberland Pears.

By Isaac B. Baxter, Peaches, Belle d'Ivry; Plums, Heuling's Superb, &c.

By Robert Buist, two new varieties of Grapes—the Decan's Superb and S. Charge's Heuling.

By William Westcott, gardener to J. Cowperthwaite, four dishes of splendid Grapes.

By William Hall, gardener to C. Cope, ten dishes very fine Grapes and Nectarines.

By Benj. Gullis, gardener to Jacob Snider, Jr., fine Grapes.

By Patrick Gallagher, gardener to Miss Gratz, several kinds of Pears, &c.

By J. Lippencott, Plums, Bolmar's Washington.

Vegetables.—By Anthony Felten, a large collection of very fine kinds.

By Dr. Rivinus, of Westchester, Kohlrabbi, a small but delicate Squash, &c.

By Patrick Gallagher, gardener to Miss Gratz, Cabbages, Tomatoes, &c.

The display on this occasion was unusually rich in fruit; the Peaches, Plums, but particularly the Grapes, from their beauty and splendor, were exceedingly tempting; those from the President's and Mr. Cowperthwaite's were remarkably fine; and Mr. Buist's new foreign varieties are an acquisition. The Decan's Superb is a dark grape and excellent; the S. Charge's Heuling is a white variety, and bears a large, round, delicious berry—shown for the first time; it will improve (being grown in a pot) when raised in a border. Of vegetables, there was the usual extensive display. Of Plants, owing to the season, there were but few shown.

THO. P. JAMES, Rec. Sec.



FIG. 55. THE MANOR OF LIVINGSTON.



FIG. 56. MRS. CAMAC'S RESIDENCE.

THE

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AND

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LANDSCAPE GARDENING embraces, in the circle of its perfections, many *elements* of beauty; certainly not a less number than the modern chemists count as the simplest conditions of matter. But with something of the feeling of the old philosophers, who believed that earth, air, fire and water, included every thing in nature, we like to go back to plain and simple facts, of breadth and importance enough to embrace a multitude of little details. The great elements then, of landscape gardening, as we understand it, are TREES and GRASS.

TREES—delicate, beautiful, grand, or majestic trees—pliantly answering to the wooing of the softest west wind, like the Willow; or bravely and sturdily defying centuries of storm and tempest, like the Oak—they are indeed the great “princes, potentates, and people,” of our realm of beauty. But it is not to-day that we are permitted to sing triumphal songs in their praise.

In behalf of the GRASS—the turf, the lawn,—then, we ask our readers to listen to us for a short time. And by this we do not mean to speak of it in a moral sense, as did the inspired preacher of old, when he gravely told us that “all flesh is grass;” or in a style savoring of the vanities of

costume, as did PRIOR, when he wrote the couplet,

“Those limbs in *lawn* and softest silk arrayed,
From sunbeams guarded, and of winds afraid.”

Or with the keen relish of the English jockey, whose only idea of “the turf,” is that of the place nature has specially provided him upon which to race horses.

Neither do we look upon grass, at the present moment, with the eyes of our friend TOM THRIFTY, the farmer, who cuts “three tons to the acre.” We have, in our present mood, no patience with the tall and gigantic *fodder*, by this name, that grows in the fertile bottoms of the west, so tall that the largest Durham is lost to view while walking through it.

No—we love most the soft turf which, beneath the flickering shadows of scattered trees, is thrown like a smooth natural carpet over the swelling outline of the smiling earth. Grass, not grown into tall meadows, or wild bog tussocks, but softened and refined by the frequent touches of the patient mower, till at last it becomes a perfect wonder of tufted freshness and verdure. Such grass, in short, as SHAKSPEARE had in his mind, when he said, in words since echoed ten thousand times,

"How sweet the moonlight sleeps upon that bank;"
 or Antonio, in his Orlando—

"The approaching night, not knowing where to pass,

She checks her reins, and on the *velvet grass*,

Beneath the umbrageous trees, her form she throws,
 To cheat the tedious hours with brief repose."

In short, the ideal of grass is a *lawn*, which is, to a meadow, what "Bishop's lawn" is to homespun Irish linen.

With such a lawn, and large and massive trees, one has indeed the most enduring sources of beauty in a country residence. Perpetual neatness, freshness and verdure in the one; ever expanding beauty, variety and grandeur in the other—what more does a reasonable man desire of the beautiful about him in the country? Must we add flowers, exotic plants, fruits? Perhaps so, but they are all, in an ornamental light, secondary to trees and grass, where these can be had in perfection. Only one other grand element is needed to make our landscape garden complete—*water*. A river, or a lake, in which the skies and the "tufted trees" may see themselves reflected, is ever an indispensable feature to a perfect landscape.

How to obtain a fine lawn, is a question which has no doubt already puzzled many of our readers. They have thought, perhaps, that it would be quite sufficient to sow with grass seeds, or lay down neatly with sods, any plat of common soil, to mow it occasionally, to be repaid by the perpetual softness and verdure of an "English lawn."

They have found, however, after a patient trial in several seasons, that an American summer, so bright and sunny as to give us, in our fruits, almost the ripeness and prodigality of the tropics, does not, like that of Britain, ever moist and humid, naturally favor the condition of fine lawns.

Beautiful as our lawns usually are in May, June, September, and October, yet in

July and August, they too often lose that freshness and verdure which is for them what the rose-bloom of youth is to a beauty of seventeen—their most captivating feature.

There are not wanting admirers of fine lawns, who, witnessing this summer *sear-ing*, have pronounced it an impossible thing to produce a fine lawn in this country. To such an opinion we can never subscribe—for the very sufficient reason that we have seen, over and over again, admirable lawns wherever they have been properly treated. Fine lawns are therefore possible in all the northern half of the Union. What then are the necessary conditions to be observed—what the preliminary steps to be taken in order to obtain them? Let us answer in a few words—*deep soil, the proper kinds of grasses, and frequent mowing*.

First of all, for us, *deep soil*. In a moist climate, where showers or fogs give all vegetable nature a weekly succession of baths, one may raise a pretty bit of turf on a bare board, with half an inch of soil. But here it does not require much observation or theory to teach us, that if any plant is to maintain its verdure through a long and bright summer, with alternate periods of wet and drouth, it must have a deep soil in which to extend its roots. We have seen the roots of common clover, in trenched soil, which had descended to the depth of four feet! A surface drouth, or dry weather, had little power over a plant whose little fibres were in the cool moist understratum of that depth. And a lawn which is well established on thoroughly trenched soil, will remain, even in mid-summer, of a fine dark verdure, when upon the same soil untrenched, every little period of dryness would give a brown and faded look to the turf.

The most essential point being a deep soil, we need not say that in our estimation, any person about to lay down a permanent

lawn, whether of fifty acres or fifty feet square, *must* provide himself against failure by this *groundwork* of success.

Little plats of ground are easily trenched with the spade. Large lawn surfaces are only to be managed (unless expense is not a consideration,) with the subsoil plough. With this grand developer of resources, worked by two yoke of oxen, let the whole area to be laid down be thoroughly moved and broken up two feet deep. The autumn or early winter is the best season for performing this, because the surface will have ample time to settle, and take a proper shape before spring.

After being ploughed, subsoiled and harrowed, let the whole surface be entirely cleared of even the smallest stone. It is quite impossible to *mow* a lawn well that is not as smooth as ground can be made. Manure, if necessary, should be applied while subsoiling. We say, if necessary, for if the land is strong and in good heart, it is not needed. The object in a lawn, it will be remembered, is not to obtain a heavy crop of hay, but simply to maintain perpetual verdure. *Rich* soil would defeat our object by causing a rank growth, and coarse stalks, when we wish a short growth, and soft herbage. Let the soil, therefore, be good, but not rich; depth, and the power of retaining moisture, are the truly useful qualities here. If the land is very light and sandy (the worst naturally,) we would therefore advise a mixture of loam or clay; which indeed subsoiling, when the substratum is heavy, will often most readily effect.

The soil, thus prepared, lies all winter to mellow and settle, with the kindly influences of the atmosphere and frost upon it.

As early in the spring, as it is in friable working condition, stir it lightly with the plough and harrow, and make the surface as smooth as possible—we do not mean

level, for if the ground is not a flat, nothing is so agreeable as gentle swells or undulations. But *quite smooth* the surface must be.

Now for the sowing; and here a farmer would advise you to "seed down with oats," or some such established agricultural precept. Do not listen to him for a moment! What you desire is a close turf, and therefore sow nothing but grass; and do not suppose you are going to assist a weak growing plant by sowing along with it a coarser growing one to starve it.

Choose, if possible, a calm day, and sow your seed as evenly as you can. The seed to be sown is a mixture of Red-top, (*Agostis vulgaris*,) and White Clover (*Trifolium repens*), which are hardy short grasses, and on the whole make the best and most enduring lawn for this climate.* The proportion should be about three-fourths Red-top to one-fourth White Clover. The seed should be perfectly clean; then sow *four bushels* of it *to the acre*; not a pint less as you hope to walk upon velvet! Finish the whole by rolling the surface evenly and neatly.

A few soft vernal showers, and bright sunny days, will show you a coat of verdure bright as emerald. By the first of June, you will find it necessary to look about for your mower.

And this reminds us to say a word about a lawn scythe. You must not suppose, as many ignorant people do, that a lawn can be mown with a brush hook, or a common meadow scythe for cutting hay in the fastest possible manner. It can only be done with a broad-bladed scythe, of the most perfect temper and quality, which will hold an edge like a razor. The easiest way to get such an article is to inquire at any of the agricultural warehouses in the great cities, for an

* We hear the Blue-grass of Kentucky makes a fine lawn at the west; but with this we have no experience.

"English lawn scythe." When used, it should be set low, so as to be level with the plane of the grass; when the mower is erect, he will mow without leaving any marks, and with the least possible exertion.

After your lawn is once fairly established, there are but two secrets in keeping it perfect—frequent mowing and rolling. Without the first, it will soon degenerate into a coarse meadow; the latter will render it firmer, closer, shorter, and finer every time it is repeated.

A good lawn must be mown every ten days or fortnight. The latter may be assumed as the proper average time in this climate. Ten days is the usual limit of growth for the best kept lawns in England, and it is surprising how soon a coarse and wiry bit of sward will become smooth turf, under the magic influences of regular and oft repeated mowing and rolling.

Of course, a lawn can only be cut when the grass is damp, and rolling is best performed directly after rain. The English always roll a few hours before using the scythe. On large lawns, a donkey or light horse may be advantageously employed in performing this operation.

There are but few good lawns yet in America; but we have great pleasure in observing that they are rapidly multiplying. Though it may seem a heavy tax to some, yet no expenditure in ornamental gardening is, to our mind, productive of so much beauty as that incurred in producing a well kept

lawn. Without this feature, no place, however great its architectural beauties, its charms of scenery, or its collections of flowers and shrubs, can be said to deserve consideration in point of landscape gardening; and with it the humble cottage grounds will possess a charm which is, among pleasure grounds, what a refined and graceful manner is in society—an universal passport to admiration.

There are two residences in this country which so far surpass all others in the perfection of their lawns, that we hope to be pardoned for holding them up to commendation. These are the UPPER LIVINGSTON MANOR, fig. 55, the seat of Mrs. MARY LIVINGSTON, about seven miles from Hudson, N. Y., and the CAMAC COTTAGE, fig. 56, near Philadelphia.*

The lawn at the Livingston Manor is very extensive and park-like—certainly the largest well-kept lawn in America, and we wish all our readers who are skeptical regarding an American lawn, could see and feel its many excellent perfections. They would only be still more surprised when they were told how few men keep so large a surface in the highest order.

The Camac Cottage is a gem of neatness and high keeping. We hope Pennsylvanians at least, who, we think, have perhaps our best lawn climate, will not fail to profit by so admirable an example as they will find there, of what SPENSER quaintly and prettily calls "*the grassie ground*."

FENCING OUT THE CURCULIO.—A cultivator of fine fruit in Queens co., N. Y. has actually succeeded in fencing out the curculio. His orchard of plums of 50 or 100 trees, is surrounded by a perfectly tight board fence, nine feet high, furnished with a tight gate. The trees are loaded with plums, very few

having been stung by the curculio; while on a few trees outside, 20 feet distant, the crops are literally destroyed. Two broods of chickens were kept within the yard, but too few to aid much in preserving the crop.

* The FRONTISPICE shows miniature views from the last edition of our Landscape Gardening, which, however, give but a faint and imperfect idea of these places.

How to take an Early Crop of Grapes in Vineries.

BY PETER HENDERSON, PITTSBURGH, PA.

THE culture of the finer varieties of the Grape under glass, is fast becoming a matter of much interest to amateurs and professional gardeners in various parts of the Union, and certainly would soon become much more so, were it not for an opinion advanced by almost all writers on this subject, viz., that we must exercise the virtue of patience for three or four years, before we allow our labor and investment to be recompensed by a crop of grapes. The reason given for this is, that by permitting the vine to bear in its second, or (by some) third season, from the time of planting, that its fruitful energies are cramped for future years. I will not venture to dispute the correctness of this dogma, correctly advanced by older and wiser heads than mine, but will confine myself to briefly detailing a method which overcomes the necessity of this "long waiting," and that too without *virtually* interfering with the above established opinion.

Before entering into a description of the method, I would premise that it is not advanced in the present instance as any thing new, having been practised, as a correspondent informs me, in the vicinity of Boston, for several years. But never having seen it in any work, perhaps it may be useful to some of the readers of the Horticulturist.

Supposing a vinery to be planted in spring, with one year old plants from pots, by the end of the season, if the *border* is what it should be, each plant will have made a shoot extending eighteen or twenty feet, or to the top of the rafter. (Fig. 57, *a*.) At the time of pruning, these shoots are cut down to eight or ten feet from the ground, or as far as the wood is well ripened. When the buds be-

gin to swell, pots, twelve or fifteen inches in diameter, are provided, well drained, and filled with very rich compost. These are then placed close to the vine, on the surface of the border, or sunk a few inches as required. Then at twelve or eighteen inches from the ground, (according to the height of the pot,) the vine is held firmly in one hand, while with the other it is twisted once short round; the *crippled* part is then buried three or four inches in the earth of the pot, a brick is placed on the top to prevent it from springing up, the shoot is tied to the rafter, and the business of forcing continued as usual. (Fig. 57, *b*.)

Every practical man will at once understand the utility of this method. The sap being impeded in its ascent by the twisted condition of the shoot, roots are emitted, as in ordinary modes of layering. These, in a short time, fill the pot from which the fruit-bearing branch is to derive its principal nourishment; at the same time the vine will break strongly *below* the twisted part, when as many shoots (*c*) may be led up as the system of training intended requires.

This method of taking a crop from young vines has been most successfully practised here, in the newly erected graperies of Mr. SPANG. For the sake of experiment, two or three were *cut off* at where the others were twisted; but the growths these have made are in no respect superior to their fruit-bearing neighbors, which goes far to prove that the layer, in this case, is no drain upon the main root, and consequently this manner of cropping young vines can be in no way injurious to their future fertility. Those who would be scrupulous of allowing their vines to bear the *third* season

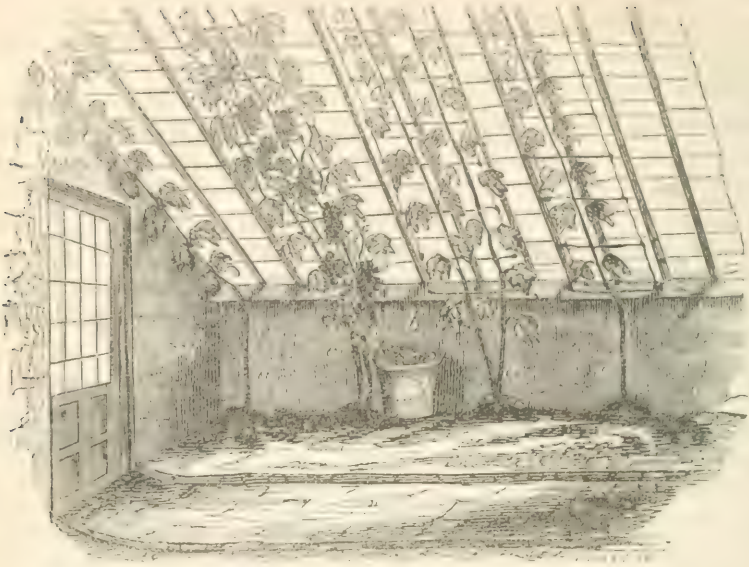


Fig. 57. *View of Interior of Grape House.*

might again repeat the operation. The extra labor attendant on this operation is trifling, being nothing more than that of keeping them duly supplied with water, or occasionally with liquid manure.

A light crop may also be had in this manner from vines the first season of planting,

provided strong plants can be procured, which have been grown two years in pots. Vines of this description are grown extensively by Mr. BUIST of Philadelphia, and also by some of the Boston nurserymen.

PETER HENDERSON.

Pittsburgh, Pa., Sept. 14, 1846.

RURAL GLANCES AT THE WEST.

BY EVELYN.

[THE following memoranda of a journey to a portion of our western states, though, as we are told, "slight and hastily written," are full of rural interest. They are from the pen of a gentleman of the finest tastes and accomplishments, whose residence on the Hudson combines as much of the beautiful as bountiful nature has any where lavished, or refined art improved. Our readers will gladly welcome "EVELYN" again to our pages.—ED.]

On the morning of the 16th July, the writer shot away westward through the val-

ley of the Patapsco, along the Baltimore and Ohio railroad.

The Patapsco affords fine water power to numerous mills and factories, but the country has not an inviting aspect in an agricultural point of view, until you reach the valley of the Monocacy. As we advanced towards Harper's Ferry, the vein of breccia or pudding stone is disclosed, from a part of which the columns were quarried for the interiors of the Houses of Congress. I think, however, that there was bad taste shown in using this parti-colored stone for

the shafts of the columns, and *white* marble for the capitals and bases—for a column, like a vase, depends mainly for its pleasing effect on its *proportions as a whole*, which is disturbed by using different colors for the three parts. This breccia might have been more appropriately adopted for *paving* the corridors of the Capitol, and would have had a richly tessellated effect. The narrow gorge in the Blue Ridge, through which the Potomac dashes, makes close neighbors of the river, the canal, and the railroad; and beetling rocks threaten to fall as the cars thunder on through this interesting pass. Ere long, I suppose, we shall see the magnetic telegraph slip in also, with its skeleton apparatus, and steal along with its spirit-like communications. Mr. Jefferson, in his "Notes on Virginia," says that the scene at Harper's Ferry is "worth a voyage across the Atlantic," which, now that steam has epitomized the voyage, and reduced the time from months to weeks, may be true. It is certainly a very interesting scene. The two rivers, the Potomac and Shenandoah, coming together from opposite points, seem to have united to rend the barrier, and the rent mountain serves as a rough frame to the distant and mellowed landscape of the lower country.

I wonder that our tourists, particularly the sketchers of scenery, do not oftener resort to the upper Potomac. We traversed a beautiful and fertile country, which will some day be covered with tasteful villas. I observed that there were few or no evergreens upon the Alleghany mountains and the hilly country beyond. The Black Walnut, Locust, Chestnut, &c., indicate a fertile soil to the summits.

In a tract of this region, marked by a recent visitation of the locusts, I noticed the preference of this insect for the Oak to deposit its eggs, and its avoiding the Locust.

A first visit to the valley of the Mississippi has much to allure the traveller—the far-reaching streams—the gigantic trees—the prolific soils, the mysterious caves! The national road traverses a well cultivated and beautiful country to Wheeling. Wheat and oats seem to be the favorite crops, the latter being disposed of very conveniently to the wagoners along the national road; the farmers are consequently opposed to the extension of the Baltimore railroad to the Ohio, which is certainly short-sighted; for whatever other classes may be injured, it may be assumed as a truism, that every railroad promotes the interest of the agriculturist.

The Ohio is a sweetly flowing, but monotonously beautiful stream—it is never picturesque or grand. This river is about 150 paces wide at Wheeling, and becomes wider very gradually. The finely wooded hills rise about three hundred feet, leaving an irregular strip of alluvial land, and thus it wears the same unvarying aspect for hundreds of miles—and coming from the wonderfully varied scenery of the Hudson, the feeling produced in my mind was wearisome.

The abundance of bituminous coal disclosed along the banks of the Ohio, is an invaluable blessing stored away for future use, where steamers are indispensable. The present price is five cents per bushel.

I was pleased to find that horticulture and fruits were often the subjects of conversation. One person remarked that he had effectually kept the peach-worm from his trees, by planting the common *Tansy* about the roots, and I presume any odoriferous plant would be a preventive.

I observed some quarries of beautiful freestone along the Ohio river, which I hope may be extensively used, and before long supersede brick walls, which are ugly, and wooden frames, which are perishable.

The people of the United States will probably in time distinguish themselves in architecture, as there are many public buildings erected. Every county must have its court-house, and gaol, and hotel—every state its capitol, and our countless cities and towns require banks and churches and asylums. In such cases, the Grecian orders will be most appropriate, while the Italian, the Gothic, and its modifications, are better adapted to suburban structures and to cottages and villas.

The country from Maysville to Lexington, Kentucky, is fertile and beautiful. The growth of blue grass and white clover, which springs up spontaneously where the forest trees are a little thinned out, give the extensive pastures the effect of improved parks.

Ashland, the residence of Henry Clay, is about a mile from Lexington, and presents a striking instance of the characteristic features of this beautiful country. To see his fine herd of improved cattle, we drove through his large pasture lots as if among the trees and grass of an English park. I saw very heavy crops of hemp ten feet high, and corn twelve to fifteen feet high, but blue grass may be considered the most valuable staple growth of Kentucky. The soil about Lexington, and several adjoining counties, is unsurpassed in durable fertility, and I can readily believe the assertion that Kentucky can sustain a population of six millions: what then is the capacity of the valley of the Mississippi! All the elements of western prosperity must at present be considered as only seminal; and when the resources of this region are developed, they will control the legislation, and shape the destiny of this Republic.

My route took me by the celebrated *Mammoth Cave*, which I reached just in time to join a numerous and gay party, arrayed in fancy costumes, and provided with a band

of music, Bengola lights, &c. I found the subterranean wonders had not been exaggerated, for the cave is not more remarkable for its great length, (15 miles,) than for the dimensions of its vast halls and avenues, its profound depths, and the mysterious river, flowing no one knows whither, with its *sightless* fish. I have never experienced a more complete illusion than is produced in the "Star Chamber," nor have I been more impressed with any object than while gazing on the half disclosed form of "*Gorin's Dome*," standing in its unexplored depths and awful solitude.

This part of Kentucky seems to be honey-combed with caverns, and bold springs sometimes stream forth and then disappear.

The Cumberland river is a beautiful stream, and winds among picturesque hills of limestone, fertile to their summits, and clothed with gigantic forest trees. The beech tree prevails, but I saw many beautiful specimens of the Kentucky Coffee tree, three feet in diameter, the Cucumber Magnolia (*auriculata*), thirty-five feet high, and I saw the remains of a Sycamore in Jackson county, Tennessee, which had been occupied as a *grocery store*. The seeds of the Coffee tree are no longer used for coffee. The "Buckeye" fruit or chestnuts, (the native Horse-chestnuts of this region,) are eaten greedily by cattle, and prove fatal to them, so that the tree is often cut down.

In Tennessee, I passed by a tract of country where the milk sickness had prevailed. The cows, and persons using their milk, died, and even the dogs and buzzards that fed upon the dead cattle. The neighboring people became so alarmed, that they would not kill the game of the infected district. The cause of this fatal sickness remains undiscovered—no deleterious vegetable was found, and many persons attribute it to poisonous water.

Col. S., of Jackson county, who was one of the pioneer settlers of this country, gave me some interesting information connected with its natural history. It was formerly covered densely with cane, twenty-five feet high, but the cattle have entirely destroyed them. The limestone hills contain the remains of sea-shells to their tops; and the soil is so strong that it is unnecessary to prepare, as is done elsewhere, seed beds for tobacco plants, any spot being sufficiently rich.

Bears were then numerous, and in searching for grubs, and snails and toads, they would move enormous logs. They ascend trees for acorns and nuts, and when surprised, precipitate themselves from a great height without injury. When so fortunate as to find a wild beehive, a bear will thrust in his paw, and continue to eat the honey, regardless of the stinging of the enraged bees.

Col. S. in early life was much engaged in surveying and exploring lands. Hunters and others, in such excursions, used to carry bear's fat melted and poured into the leg skins (a leathern bottle) of a deer, which with parched corn, was portable and nutri-

tious, and would keep uninjured in all weathers.

He once lodged with a hunter who relied entirely upon his rifle for the support of his family. Their rude shed was made weather proof with the skins of buffaloes, bears and deer, which formed also their dormitories and beds. Bear meat and venison hung in the smoke of their fire; the corn was pounded in a wooden mortar, and sifted through a skin perforated with a hot needle. They had a small patch of mustard for a salad now and then, and their cows came up regularly at night to the brush fires made to smoke off the musquitoes. Such were and are the fascinations of frontier life!

In going down to Nashville, I passed by the Hermitage. The old General was interred in the garden—"requiescat in pace." Nashville is situated in a fertile, healthful, and beautiful region, but the tide of emigration passes by it, and sets strongly for the *Far West*, and nothing short of the Pacific and the plains of Mexico will arrest the host which is hurrying there, made up of the adventurous emigrants and frontier hunters, who court danger and disregard privation.

EVELYN.

Remarks on some few Varieties of Fruits.

BY ROBERT B. PARSONS, FLUSHING, L. I.

I OBSERVE that some of our favorite fruits have not been described in the "Fruits and Fruit Trees of America;" among them are the following:

Autumn Bough Apple.—This is a very superior fruit, ranking indeed among our best sweet apples, and worthy of extensive cultivation. It is rather large, somewhat of a calville-shape, though with the ribs not quite so prominent as is usual with apples

of that class; oblong, diminishing very much to the eye. Skin smooth, pale yellow, with a few scattered dots. Eye of medium size, and very deeply sunken. Stalk rather slender, set in a deep narrow cavity. Flesh white, very tender, and with a rich and sweet, yet sprightly flavor. Ripens from 25th of Eighth month to the 20th of Ninth month. The tree is exceedingly productive, and of very vigorous growth.

Green Catharine Peach.—This fine free-stone is certainly quite a distinct fruit from the "Green Catharine" of the London Horticultural Society's Catalogue. I presume they have received their tree from some doubtful source, as the kind cultivated here has been long known in New-York and its vicinity, as one of our best varieties.

Leaves with globose glands. Fruit large, somewhat oval, a little depressed at the top, with the suture slightly marked on one side. Skin greenish-yellow, with occasional dots, and the cheek marbled with red. Flesh greenish white, marked with red at the stone, very juicy, melting, and deserving a place in every good collection. Ripens from 25th of Eighth month to 15th of Ninth month. Flowers small.

White Rareripe.—This fruit has been, by some, cultivated for the Morris White, but is far superior to that variety. We were, at one time, somewhat in doubt as to the true name, but from various circumstances are now quite convinced that this is correct.

All good judges in this vicinity consider it as, without exception, the best peach of the season, and to show that we here are not alone in this opinion, I annex the following note:

"Messrs. PARSONS, Flushing, L. I.

"GENT.—The peaches you did me the favor to leave with me, were tested by several members of the fruit committee of the Mass. Hort. Society, who consider it one of the best varieties, and deserving of extensive cultivation. Very respectfully,

"SAMUEL WALKER.

"Boston, Sept. 17, 1846."

Description.—Leaves with globose glands. Fruit large, round, with a suture slightly marked on one side. Skin yellowish green, occasionally, when exposed, the cheek slightly stained with red. Flesh pale, red at the stone, juicy, melting in an unusual degree, high flavored and delicious. Ripens from 5th to 20th of Ninth month. Flowers small.*

ROBT. B. PARSONS.

Flushing, 9 mo., 25th, 1846

DESCRIPTION OF TWO NEW PEARS.

BY L. C. EATON, PROVIDENCE, R. I., AND W. R. SMITH, MACEDON, N. Y.

WE are glad to be able to introduce to the notice of pomologists, two new fruits of so much real merit as the Pratt and Osband Summer Pears.

The *Pratt Pear* is quite a celebrated variety in Rhode-Island. The specimens of the fruit sent us by L. C. EATON, Esq., were of *first-rate quality*. We learn from one of the best judges of fruit in Boston, that he has tasted this variety this season, and is disposed to give it the same rank. The variety is quite new, and we believe it is as yet only to be had of growers of fruit trees in Rhode Island. There is every reason to believe that among the many sorts

annually offered to public notice, most of which prove indifferent in quality, this will be an exception—a fruit of real merit. Its flavor appeared to us to be about midway between a rich Marie Louise and a juicy Napoleon.

The following is the account of this fruit, by Mr. EATON. The outline is one from the specimen received.

* We are glad to find that our correspondent has succeeded in finding a white Rareripe, which is distinct from the *Morris' White*, and superior to it. We have ourselves frequently heard of such a fruit, but all our attempts to find such a fruit have proved unsuccessful—the sorts usually so called being the *Morris White*, the leaves invariably having *reniform* glands.—Ed.

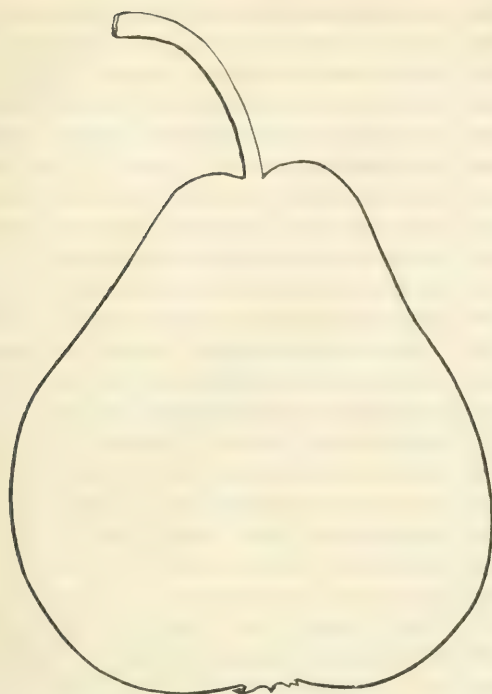


Fig. 58. Pratt's Pear.

THE PRATT PEAR.—I send you specimens of the "Pratt" Pear. It is much esteemed here. This season, it has ripened much earlier than usual, and has not its ordinary excellence.

The following is a description of it, as given by the fruit committee of our Horticultural Society:

Size, above medium; form, obovate; color, greenish-yellow, sprinkled with numerous grey dots and russet spots; stem slender, an inch long, and inserted in a tolerably deep depression; calyx open, with slender segment set in a broad open basin; flesh white, tender, melting, fine-grained, abounding with saccharine well-flavored juice. Ripe in September. Originated in Johnston. L. C. E.

Providence, September 12, 1846.

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OSBAND'S SUMMER is a very popular variety in the neighborhood of Rochester. We

saw and tasted it there when in perfection this season, and considered it a valuable acquisition. The following history and description, are from our correspondent, Mr. SMITH of Macedon.

OSBAND'S SUMMER PEAR, (*Osband's Favorite*, of some.)—This beautiful and excellent native pear has acquired considerable notoriety in this vicinity, and is destined, without doubt, to take rank with the best of its season. It is in perfection previous to the Dearborn's Seedling, and so far as I can ascertain, subsequent to the Bloodgood. It is a fine grower, and bears young and well. So strongly does it resemble the White Doyenné in outline and flavor, that it has been known in Rochester for several years as the "Summer Virgalieu," a name obviously improper, as the Doyenné d'Eté, a distinct fruit, has been for some time described, and extensively circulated. The description of the fruit under consideration so nearly corres-

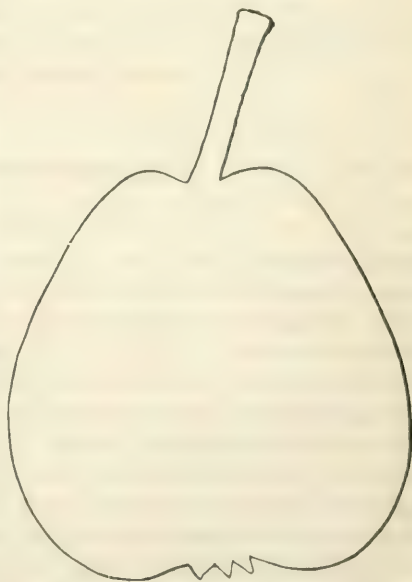


Fig. 59. Osband's Summer Pear.

ponds with that of the Doyenné d'Ete, that some intelligent cultivators are inclined to think them identical. But aside from the facts in the case, it may be remarked as conclusive against this opinion, that the Osband's Favorite has a large open calyx, with reflexed segments, while the Doyenné d'Été has "calyx small, closed."* The former, too, appears to have much more of color than the latter.

All doubts on this point will, I think, be removed by reference to the following history, which I obtained from G. OSBAND, a Methodist minister, in good standing, and every way worthy of confidence. Early in the settlement of this part of the state, a small nursery was planted by Pardon Duffer in the vicinity of Palmyra, Wayne co. A public road was subsequently laid out through the premises, and a part of the trees in consequence removed. During this labor, the father of my informant, accidentally passing, was accosted by the proprietor, with, "here, I will give you this," handing a pear tree about two feet in height, with branches forking out near the ground. On

reaching home, the tree was divided through the roots, and the two parts planted. Here one of them produced abundant crops for many years, and finally died, probably from the "blight." The other was soon removed to a farm in the north part of this town, (Macedon,) and last year I gathered a few specimens from it, the last which the same potent enemy will allow it to produce. The name given is at the suggestion of the family who brought it into notice.

Size, scarcely medium, about two inches long, and two in diameter. Form, obovate, resembling a White Doyenné. Skin, smooth, shining, clear yellow, profusely marked with small green dots; well ripened specimens have a clear red cheek, slightly russeted at the crown. Stalk, an inch long, rather stout, a little knobbed, not deeply inserted in a cavity of four unequal sides. Calyx, large, open, segments reflexed. Flesh, white, a little coarse, juicy. Flavor, rich and sugary, with a slight musky perfume. Ripe from 5th to 10th of 8th mo. (August.)

WM. R. SMITH.

Macedon, 8 mo 1846

THE YELLOWS IN PEACH TREES.

BY L. WYMAN, JR., OF WEST-CAMBRIDGE, MASS.

HAVING received of late quite a number of letters and notes from individuals interested in the cultivation of the Peach tree, requesting my opinion as to the origin of, and the best mode of treatment to be given to Peach trees affected with the *Yellows*, (by some called a disease,) I will state, through the medium of the Horticulturist, the result of my own observations, obtained from a ten or twelve years experience in the cultivation of the Peach tree; from which

those interested may form their own opinion.

Having devoted much attention to the culture and habits of the Peach tree, I am of the opinion that what is called the yellows, is not a disease in itself, so much as the result of a lack of nourishment of the right kind, or the natural result of bad culture upon an unfavorable soil. I have never found, after the most careful microscopic examination of the roots of the trees affected with the yellows, the appearance of any worm or mi-

* See Downing's "Fruits and Fruit Trees of America."

nute insect, that would favor the supposition that it was the result of animal attacks. That it can be communicated from one tree to another by contact, I have not the least doubt. I have used the knife in pruning a healthy tree, which had been used in pruning a tree affected with the yellows, and it was thus communicated to the healthy tree, which showed all the signs and appearances of the diseased tree: the leaves turned yellow, and the small twigs or limbs shrivelled like those of the before mentioned tree. I have noticed that the healthy tree was more or less affected with the yellows communicated from the pruning knife, as more or less predisposed, if I can use the term, by soil and situation to receive it. The better the soil, and the higher the state of cultivation, the less the tree would be affected by the yellows; and in some six or eight cases only, the extreme ends of the branches were affected at all; and which being cut off, and a proper nourishment being given, the yellows disappeared entirely from the tree; thus favoring the idea that it originates in the state of the soil, and the mode of cultivation.

Again, in order to satisfy myself experimentally, I pruned the branches of half a dozen healthy trees with the knife with which I had just pruned several trees which had the yellows, and I cut off only the ends of the principal branches. From some trees I took one branch, from others two, three and four, always noting carefully the result, which I found to be as follows: the disease or malady was communicated directly to the tree, and might be arrested by cutting or trimming, close to the body of the tree, those limbs or twigs which had been before shortened for the sake of the experiment.

I am inclined to the opinion that the yellows may be the result of an unhealthy

soil,* as I have always noticed that the soil upon which the Peach tree is cultivated, operates, in a very distinct way, either more or less favorably or unfavorably upon the growth and development of the tree and fruits.

I have always found that trees grown upon a good deep soil, of a fair proportion of yellow loam well enriched with manures, into the composition of which a large proportion of ashes and other alkaline and animal matter entered, were the most vigorous, and gave the most abundant crops, with the largest and fairest fruits; and I never found such a soil quickened with such manure, that ever exhibited the least signs of the yellows. I have found the yellows often in trees which were grown upon poor land, without manure, or with but little manure, and that of a poor quality; and I find by observation also, that trees grown in land in which much sorrel abounds, especially if suffered to clog the roots of the peach tree, are more subject to the yellows than if grown even on very poor land; and my reason for believing the yellows to be owing very much to the manner of cultivation is based upon the following facts: I have taken trees, which have decidedly shown the yellows, and after a thorough application of those manures which contain a large proportion of alkalies, and salt in small quantities, judiciously applied at proper seasons, and with proper pruning, brought them back again to a healthy, bearing and vigorous state.

The best remedy for this malady called the yellows, I believe, where one can afford to apply the best, is to *pull up all the affected trees*, and replant with fresh, healthy ones; and then keep a constant eye to the roots and branches, and upon the least signs

* We suppose our correspondent means unfavorable or uncongenial soil.—Ed.

of disease apply the remedy. The yellows are not only shown in the leaf, but may be known by the shrivelled and dry appearance of the branches also. I have carefully noted the results of several experiments made this season, and am more fully convinced that the cultivation and manures

used, together with the soil upon which the Peach tree is grown, deserve a very important consideration from all those who would have this excellent fruit upon their tables, as well as little trouble from the yellows.

L. WYMAN, JR.

West-Cambridge, September, 1846.

MR. FORTUNE'S HORTICULTURAL MISSION TO CHINA.

OUR readers are already aware, that in 1843, as soon as China, through the new treaty made by the English, appeared more accessible to foreigners, the Horticultural Society of London, with its usual zeal, dispatched an able collector, Mr. ROBERT FORTUNE, to that country, in search of new plants.

Mr. FORTUNE has been eminently successful in his mission—one which, by the way, will prove quite as interesting in its results to all our readers, as any of those which had for their motive—openly or disguised—the opium trade, or the spread of cheap calicoes.

After an absence of a little more than two years, Mr. FORTUNE reached England in June, 1846, bringing with him the last of the vegetable treasures he had secured, in eighteen glazed cases, having previously transmitted a large number of species to England. These are, with the exception of *only two species*, all now well established in the garden of the Society near London, and as soon as they are somewhat propagated, we shall hope to see them introduced into this country.

The climate of the higher portions of China is so nearly like our own, that many of the trees and plants from thence will prove entirely hardy here. When we say that among the new plants, which are the result of this expedition, are the celebrated *Shanghai Peach*, the *true Mandarin Orange*,

a dozen or twenty beautiful sorts of *Tree Pæonias* of novel colors, a superb new *yellow climbing Rose*, and an *everblooming Rose*, *five-colored*, a *white Wistaria* or *Glycine*, and several new and handsome hardy *Azaleas*, we only mention a few of the most important of the prizes which have rewarded the zeal of the London Horticultural Society.

In the last number, Part III., of the Society's Journal, which is just issued, we find a sketch of Mr. FORTUNE's narrative, so agreeably told, and so full of interest to horticulturists everywhere, that we are confident our readers will thank us for immediately placing, as we here do, the most of it before them.

“When the news of the peace with China first reached England in the autumn of 1842, the Council of the Horticultural Society of London, believing that an extensive field of botanical and horticultural treasures lay unexplored and unknown in the northern parts of that empire, appointed me as their collector. I left England early in the spring of the following year, and arrived in China on the 6th of July. Several cases of living plants were sent out under my charge, as well as a large quantity of vegetable and flower seeds, the greater part of which arrived in excellent order. The fruit trees and vegetable seeds were greatly prized by English residents in the northern parts of the country, where such things succeed much better than they do in the south. Captain Balfour, H. M. Consul at Shanghai, kindly offered me ground in the garden of the Consulate, where I could plant the trees, and where they were to be considered as public property: that is, any one who might apply was to be supplied with grafts at the proper season of the year. By this means, the kinds would soon be multiplied, and secured in the country until the fruit could be seen and appreciated by the Chinese themselves. Such things are o

great value in China, owing to the very bad varieties of both apples and pears which the Chinese at present possess.

"The voyage out was too much like others of the same kind to afford much worthy of notice, until we reached the beautiful islands in the Java sea. The vessel anchored abreast of the village of Anger, in Java, for the purpose of procuring a supply of water and other fresh provisions; and during the time required for this purpose I gladly availed myself of the opportunity of going on shore. Here I found the fine new variety of *Dendrobium secundum*, which I afterwards sent home, and which has been given away to several of the Fellows of the Society.

"Having a fair monsoon up the China sea, we arrived at Macao in a fortnight after leaving Java. The first view we had of the shores of this celebrated country was far from promising. The islands which lie scattered over this part of the sea, as well as the shores of the main land, have a most bleak and barren appearance. Granite rocks are seen every where protruding through the soil, and rearing their heads above the scanty vegetation. The soil of the hills is a reddish clay, containing very little vegetable matter, and is mixed with portions of the granite in a decaying state, and generally has a cracked and burnt appearance. It is of course a little richer in the ravines and valleys, where the best portions are annually washed down by the rains; but even here it is far from being good soil, at least what would be considered as such in England.

"When I landed at Hong Kong, my letters of introduction, both from the government and from private individuals, procured me many friends, who were most anxious to forward the views of the Society. Messrs. Dent & Co., in particular, not only gave me a room in their house, but placed their gardens at Macao and Hong Kong entirely at my service, giving me leave to take from them any plant I might wish to send to England, and to use them for depositing any of my collections in, until an opportunity occurred of sending them home.

"As soon as I was fairly clear of the ship, I began my researches upon our island of Hong Kong, then in its infancy as a British settlement. This island is a chain of mountains, 1800 or 2000 feet high, sloping in a rugged and unequal manner on each side, down to the sea. It is about ten miles in length, from east to west; in some places three, in others five in breadth, and contains very little level ground capable of cultivation. In its general features and sterility, it is exactly the same as I have already noticed with regard to the other portions of this part of the Chinese empire.

There are few trees of any size to be met with on the island, except those kinds, such as Mangos, Lee-chees, Longans, Wampees, Guavas, and other well known things, which are planted and reared in some of the most fertile spots for the sake of their fruit. *Pinus sinensis* is met with every where on the hill sides, but it never attains any size, partly owing to the sterility of the soil, and partly to the practice which the Chinese have of lopping off its under branches yearly for firewood.

Several species of *Lagerstrœmia* are met with, both wild and in gardens, and are so ornamental when in bloom, that they always reminded me of our own beautiful Hawthorn. The Screw Pine (*Pandanus odoratissimus*) and two or three well known species of Palm, are met with on the low land near the sea. As we ascend, the hill sides and ravines become rich in *Melastomas*, *Lycopodiums*, Ferns, *Phaius grandifolius*, and several other familiar orchideous plants. It is a curious fact, however, that all the fine flowering plants which we admire so much in England, are found high up on the hills. The Azaleas, *Enkianthus*, and *Clematises*, for example, generally choose situations from 1500 to 1800 feet above the level of the sea.

"After three weeks of hard labor and exposure under a July sun, both on the islands and main land in this part of China, I was forced to come to the conclusion at last, that the south had been too much ransacked by former botanists to yield now much that was really new, and at the same time ornamental. Two or three good plants, however, to a certain extent, repaid me for my labor, and these reached England alive a few months after this time. Their names are *Chirita sinensis*, *Arun-dina sinensis*, *Spathoglottis fortunei*, and a curious dwarf *Lycopodium*, which is like a tree fern in miniature.

"The heat at this time was very great, the thermometer frequently standing at 92° F. in the shade, and 140° when exposed to the sun; but even this was nothing when compared with those sensations which every foreigner in Hong Kong feels from the dry and heated air, probably caused by the absence or scarcity of trees and shrubs.

"Having completed my researches for the season at Hong Kong, I left the island on the 30th of August, and proceeded to Canton and Macao. At Canton, the principal objects of attraction in a botanical way are the gardens of the Hong merchants, and the celebrated collections at a place called Fa-tee. The latter are simply nursery gardens, where plants are grown and exposed for sale. Many beautiful species, almost all natives of the south of China, are met with in these gardens, which, however, possess little that is really new or unknown in England. I believe the only plants of any value which I was able to introduce to this country, from the gardens of Canton and Macao, were the Fingered Citron, the true Mandarin Orange, and the striking and beautiful *Camellia hexangularis*.

"I now determined to proceed immediately to the northern provinces, as soon as I could find a vessel in which I could engage a passage. I sailed on the 23d of August, and after visiting the island of Namoa, and some others of less note on the way up, I reached Amoy on the 3d of September. To my disappointment, this part of China was even more sterile and barren than that in the province of Canton. The island of Koolungsoo, then in the hands of the British, is divided from Amoy by a narrow arm of the sea. From the number of pretty houses and gardens, which were found upon it when taken by our troops, there can be no doubt that it was here where the rich and gay among the Amoy merchants had their country and family re-

sidences. The gardens, however, pretty as they were, contained few plants of value, or different from what I had already met with at Hong Kong and Canton. Some roses which I sent to the Horticultural Society from that place, are said to be very distinct and fine, but I have never had an opportunity of seeing them in bloom.

"Having travelled all over the country adjacent to Amoy, and completed my researches, I sailed again towards the Formosa Channel, on my way to our most northern stations of Chusan, Ningpo and Shanghai. The monsoon, however, had now changed from southwest to northeast, and we experienced very stormy weather, and strong northerly currents, which, of course, were directly against us. The vessel was at last obliged to put into the Bay of Chinchew from stress of weather, and having sprung her bowsprit in the gale, it was impossible for her to proceed. In a day or two her cargo was got out and put into another vessel, in which I also embarked, and we again proceeded on our voyage. This attempt was even more disastrous than the last, for after being out for several days, and nearly through the Formosa channel, we met one of those dreadful gales so well known to the navigators of these seas; our newest and strongest sails were split to pieces, the bulwarks washed away, and in spite of every exertion, we were driven back far below the bay from which we started about a week before. Two plant cases, which I had with me at the time, were dashed to pieces, and their contents, of course, completely destroyed. The horticulturists and gardeners of this country, who are so critical when they find a few deaths in plant cases after a voyage of fifteen thousand miles, know little of the dangers of the ocean.

"During our stay to refit in the bays of Chimoo and Chinchew, I availed myself of the opportunity of exploring the adjacent country. It was on these hills that I found the pretty *Abelia rupestris*, *Campanula grandiflora*, and *Statice fortunei*, which are now in the garden of the Society at Chiswick. The natives in this part of the country are a lawless and independent race, who care nothing for the government, and who set the laws of the empire at defiance. I and my servant were sometimes placed in most critical situations amongst them, where a great deal of tact and determination were necessary to get us safely out of their hands.

"Our little schooner being refitted, we again hove up our anchor, and stood out to sea. This time the winds favored us, and in ten days, we were safely moored in the beautiful Bay of Chusan. As we approached the islands of the Chusan Archipelago, I was much gratified with the great change in the aspect of the country. There was a freshness and luxuriance about the vegetation entirely different from what I had seen before. Fewer rocks were seen protruding through the ground, and many of the hills were cultivated nearly to their summits, which at once proved the superior nature of the soil. The first glance at the vegetation convinced me that it was very different from what I had seen in the south; and that the north of China must be the chief scene of my future labors in the country.

"I now delivered my letters of introduction to Major-General Sir James Schoedde, the officer in command, who very kindly procured me quarters in a Chinese house inside the city of Tughae, to which I removed from the ship, and immediately commenced operations. I was now fortunate enough in getting acquainted with Dr. Maxwell of the Madras army, who was stationed there at the time. This gentleman, who was an ardent lover of botanical pursuits, had been most indefatigable in his researches, and was consequently able to give me a great deal of valuable information.

"I was now continually travelling amongst the hills, not only of Chusan, and the adjacent islands, but frequently on the main land, where I went without being molested in any way. The dispositions of the people seemed to have changed with the aspect of their country. Their features were more European; they seemed perfectly harmless, appearing to bear us no ill will, and frequently were even kind, which is saying a great deal for the Chinese, unless they have some selfish motive for such conduct.

"After getting together a considerable number of plants and seeds, an opportunity offered of visiting Shanghai. That port had not been yet formally opened, and the chances of getting there were few, and not to be neglected. I was therefore glad of the opportunity, and sailed for the Yang-tse-Kiang on the 13th of November. As we approached Shanghai, we seemed to have got into a new country. The mountainous scenery had entirely disappeared, and even from the top of our highest mast, there was not a hill seen to bound the distant horizon—all in view was one flat level plain. This is what is called the valley of the Yang-tse-Kiang, and is the great northern Nankin cotton district. The land is a rich deep loam, and is without doubt the finest in China, if not in the world.

"In a country like this, which is every where flat and cultivated, it was not expected that I could find very many wild plants. Two, however, were met with, which have since attracted a considerable share of notice in England. I allude to *Cryptomeria japonica* and *Anemone japonica*. The latter was found when in full flower, amongst the graves of the Chinese, which are round the ramparts of the city. It blooms in November, when other flowers have gone by, and is a simple and beautiful ornament to the last resting places of the dead. If the number of wild flowers in this district was few, they were well made up by those which I afterwards found in gardens and nurseries. From the number of flower shops in the city, which at this season were filled with *Chrysanthemums*, I was quite certain that there must be somewhere in the vicinity nurseries for their cultivation, but the great difficulty was to find them out. The Chinese here, who knew little or nothing of us, except as their conquerors, were frightened and jealous, and would give no information on the subject. They always suspected I had some other object in view than simply collecting the plants of their country. At that time I could not speak a word of the language; and my servant, who was brought up from the province of

Canton, was equally at fault, so that every thing was up-hill work with us. However, by examining every hole and corner of the city and suburbs, and sometimes getting the boys who were less jealous than the rest, to assist us, we discovered several nurseries which contained large collections of plants, many of which were quite new and very ornamental. I was also much assisted by H. M. Consul, Captain Balfour, who was always ready and willing to aid me in my pursuits. Amongst other things a very valuable collection of Tree Pæonies was obtained at this time.

"It was now the depth of winter, and as vegetation was leafless, it was impossible to make any thing like a complete collection until the following year, when the plants would be covered with leaves and flowers. I therefore packed up the things which I had already secured, and sailed for Ningpo on my way to the south.

"Here I had the same difficulties to encounter as I had at Shanghai, owing to the jealousy of the Chinese. Ultimately, however, I discovered several mandarins' gardens and nurseries, from which I made additions to my collections. All these things were of course out of flower, and some of them leafless at this season of the year; but it will be seen afterwards that many of them proved most remarkable plants. Here, as at most other places, I made many inquiries after the supposed Yellow Camellia, and offered ten dollars to any Chinaman who would bring me one. Any thing can be had in China for dollars! and it was not long before two plants were brought to me, one of which was said to be light yellow, and the other as deep as the Double Yellow Rose. Both had buds upon them, but neither were in flower. I felt quite certain that the Chinaman was deceiving me, and it seemed so foolish to pay such a sum for a plant which I would, in all probability, throw away afterwards, and yet I could not lose the chance slight as it was, of possessing the Yellow Camellia. Moreover, there was a written label stuck in each pot, both of which were old, and apparently the labels and writing had been there for some years. At last we compromised the matter; I agreeing to pay half of the money down, and the other half after the plants had flowered. On these conditions I got the Camellias, and took them with me to Hong Kong. It is almost needless to say, that when they flowered, nothing was yellow about them but the stamens, for they were both semi-double worthless kinds.

"I now hired a Chinese boat, and crossed over to Chusan, where I arranged my collections and sailed for the south, arriving at Hong Kong on the 19th of January, 1844. My chief object now was to get cases made, and my collections packed and shipped for England. About eighteen cases were sent home in three different ships about this time, and several small packets of seeds were sent by the overland mail.

"As it was autumn when I was travelling in the north of China, many of the plants on the hills were in seed, and it was impossible for me to say whether their flowers were ornamental or not. I made a selection, however, upon chance, considering that there would be at least, some good

things amongst them, and that by this means a season would be gained. I did not intend them to be given out to the country, until they were proved at the garden, or until I could have an opportunity of seeing them in bloom on the Chinese hills, and of sending a description home. The seeds being in good condition were soon raised, and unfortunately many of them were given away which did not prove at all ornamental. Others, however, were really valuable things, amongst which I may mention the *Buddleia lindleyana*, the *Azalea ovata*, and the *Cryptomeria japonica*.

"The plant cases to which I have already alluded, contained amongst other things, the following, many of which have been already given away to the Fellows of the Society:

<i>Chirita sinensis</i> ,	<i>Buddleia lindleyana</i> ,
<i>Arundina sinensis</i> ,	<i>Anemone japonica</i> ,
<i>Spathoglottis fortunei</i> ,	<i>Lycoris radiata</i> ?
Fingered Citron, (true)	<i>Daphne tortuosa</i> ,
<i>Campanula grandiflora</i> ,	<i>Forsythia viridissima</i> ,
<i>Azalea obtusa</i> ,	<i>Jasminum nudiflorum</i> ,
" <i>ovata</i> ,	<i>Weigela rosea</i> ,
" <i>squamata</i> ,	<i>Indigofera decora</i> ,
<i>Abelia rupestris</i> ,	<i>Cryptomeria japonica</i> ,

and twelve or thirteen very fine new varieties of the Tree Pæony, having several shades of purple, lilac, deep red, and white flowers. Besides these, the cases contained a number of valuable plants which have not flowered, and about which little is at present known.

"While I was waiting in the south of China for the dispatch of the collections just noticed, I took the opportunity of visiting Canton and Macao at two different times, and saw the Camellias, Azaleas, Moutans, and other plants in bloom. The gardens of the Hong merchants and the nurseries at Fa-tee, are particularly gay during the spring months with these flowers. The Moutans are yearly brought down from the north to Canton, where they flower shortly afterwards, and are then discarded as useless, as the climate of the south of China is too hot for them; this trade, therefore, is not unlike that of Dutch hyacinths in Europe.

"The mountains near Canton, which I visited in company with the late Mr. Lay, as well as those of Hong Kong, were very gay at this season with the flowers of the beautiful *Enkianthus reticulatus*, *Azalea squamata*, and various other species. This part of China, however, had little to increase my collections, and on the 26th of March I started again for the northern provinces.

"The whole of this season was spent in the Chusan, Ningpo, and Shanghai districts, my principal object being to see all the plants of these places in flower, and to mark those which I wanted for seed. In order to do this effectually, I was obliged to visit each district three or four times during the summer and autumn.

"The Flora of Chusan, and all over the main land in this part of China, is very different from those portions of the south which I have already described. Almost all the species of a tropical character have entirely disappeared, and in their places we find others related to things found in the temperate parts of the world. I here met, for the first time, the beautiful *Glycine sinensis*, wild on

the hills, where it climbs in hedges and on trees, and allows its flowering branches to hang in graceful festoons, by the sides of the narrow roads which lead across the mountains. The *Ficus nitida*, so common around all the temples and houses in the south, is here unknown, and many of those beautiful flowering genera, which, as I have before remarked, are only found on the top of the mountains in Hong Kong, here have chosen less exalted situations; I allude more particularly to the *Azaleas* which abound on the hill-sides of this island. Most persons have seen and admired the *Azaleas* which are yearly brought to the Chiswick fetes, and which as individual specimens surpass, in most instances, those which grow and bloom on their native hills; but few can form any idea of the gorgeous and striking beauty of these *Azalea*-clad mountains, where on every side, as far as our vision extends, the eye rests on masses of flowers of dazzling brightness and surpassing beauty. Nor is it *Azaleas* alone which meet the eye and claim our attention: *Clematises*, wild *Roses*, *Honeysuckles*, the *Glycine sinensis*, noticed above, and a hundred other things, mingle their flowers with them, and make us confess, that after all, China is indeed the 'central flowery land.' There are several species of *Myrtaceous* and other *Ericaceous* plants, which are also common on the hills, but no species of heath has been ever found; and I believe the genus does not exist in this part of China.

"The Tallow tree (*Stillingia sebifera*), is abundant in the valleys of Chusan, and large quantities of tallow and oil are yearly extracted from its seeds. The *Laurus camphora*, or Camphor tree, is also common, and attains a very large size, but, so far as I know, no camphor is extracted or exported from the island. Thea *viridis*, the Green Tea shrub, is cultivated in some parts rather extensively; but if we except a small quantity of tea which is annually sent over to Ningpo and the adjoining towns on the main land, the whole of the produce is used by the natives themselves. Every small farmer and cottager has a few plants on his own premises, which he rears with considerable care, but seems to have no wish to enter on its cultivation on a larger scale for exportation. Indeed it is questionable if it would pay, as the soil is scarcely rich enough; and although the shrub grows pretty well, it is far from being so luxuriant as it is in the larger tea-districts of the main land, which I afterwards visited.

"The forests of different varieties of Bamboo are very striking, and give a kind of tropical character to the scenery of this part of the country. I do not know any thing more beautiful than the Yellow Bamboo, with its clean straight stems and graceful tops and branches waving in the breeze; it always reminded me of our young larch forests in England. The *Pinus sinensis* noticed in the south is also common here: it seems to be an exception to the general rule, being found over all the country, and in every degree of latitude. The *Cunninghamia sinensis* is also found in abundance; and besides these, there are several species of Cypress and Juniper found growing around the tombs of the rich, which are scattered over the valleys and hill-sides.

"The fruits of Chusan are of very little importance; nearly all the peaches, grapes, pears, plums, oranges, &c., which are seen in the summer season in the markets, are brought from the main land. There are two fruits, however, cultivated on the island, which are of considerable excellence; the one is called by the Chinese *Yang-mae*; it is a scarlet fruit not unlike an arbutus or strawberry, but having a stone like a plum in its centre; the other is the *Kum-quat*, a small species of citrus, about the size of an oval gooseberry, with a sweet rind and a sharp acid pulp.

"The new plants of the island were seen in flower this season for the first time. Early in the spring, the hill-sides were covered with a beautiful *Daphne*, (*Daphne fortunei*) and the *Azalea ovata*, certainly one of the finest and most distinct species which I have introduced. *Weigela rosea*, one of the most beautiful shrubs of northern China, which was first met with in the garden of a mandarin near the city of Ting-hae on this island, was this spring loaded with its noble rose-colored flowers. *Buddleia lindleyana* was also seen this year in great perfection growing in the hedges on the hill-sides, often side by side with the *Glycine sinensis*.

"Ningpo is about forty miles west of Chusan, and is situated on the main land. My visits here, at different times during this summer, were attended with much less difficulty than in the preceding autumn. I was now beginning to speak a little Chinese, and was perfectly acquainted with the town, and the whole of the places where the different mandarins' gardens and nurseries were situated. This was of much importance, as I was able to save so much time, which used to be formerly spent in fruitless inquiries. The mandarins were particularly inquisitive at this time about every thing which related to the movements of the English or other foreigners, who were likely to establish themselves at their port; and as we were able to keep up a conversation in Chinese, I soon found that my frequent visits were very agreeable to them. The nurserymen, too, having found, I suppose, that my money was as valuable to them as that which they received from their own countrymen, were no longer shy, but most anxious to sell me any plants which I wanted.

"The gardens of the mandarins, although small, were extremely gay, particularly during the early months of the year; and what was of more importance to me, contained a number of new plants of great beauty and interest. On entering one of the gardens on a fine morning in May, I was struck with a mass of yellow flowers which completely covered a distant part of the wall; the color was not a common yellow, but had something of buff in it, which gave the flowers a striking and uncommon appearance. I immediately ran up to the place, and to my surprise and delight found that I had discovered a most beautiful new yellow climbing rose. I have no doubt, from what I afterwards learned, that this rose is from the more northern districts of the Chinese empire, and will prove perfectly hardy in Europe. Another rose, which the Chinese call the 'five-colored,' was found in one of these gardens at this time; it belongs to

to the section commonly called China Roses in this country, but sports in a very strange and beautiful manner. Sometimes it produces self-colored blooms, being either red or French white, and frequently having flowers of both on one plant at the same time, while at other times the flowers are striped with the colors already mentioned. This will also be as hardy as our common China rose. *Glycine sinensis* is often grown on a flat trellis in front of the summer house, or forms a kind of portico, which affords a pleasing shade from the burning rays of the summer's sun. Entwined with one of these trees, I found another variety, having very long racemes of pure white flowers, which contrasted well with the light blue of the other. I immediately asked permission from the old Chinese gentleman to make some layers of this fine plant, and I am happy to say that one of these is now alive in the garden at Chiswick.

"After seeing the different gardens and nurseries in the town, I generally left Ningpo for the hills in the district. The natives in this part of the country, as I have already stated, are quite a different race from those in the south, and perfectly harmless in their dispositions: I have often resided amongst their mountains for weeks at a time, and never had any reason to complain of the treatment I received at their hands. The temple of Tein-tung, a large monastic building situated amongst the green tea hills, about twenty miles from Ningpo, was a favorite place of resort, owing to the peculiar richness of the vegetation in this part of the country. Here many of the trees and shrubs, which were only found in gardens in other places, were wild on the hills and in the hedges. The *Forsythia* already named, was common on the road-sides, and was covered with its bright yellow flowers in early spring. Several species of *Viburnum* of great beauty, and one *Hydrangea*, were also met with here, besides all the other plants which have been already noticed as abounding on the hills of Chusan. *Cryptomeria japonica* formed one of the most beautiful and stately trees which are found on the hill-sides; it grows about as tall as a common pine, the stems are perfectly straight, its branches hang drooping down in a most graceful manner, and altogether it is not unlike the *Auracarias* of Norfolk Island, or Brazil, but probably much more hardy. The wood possesses great strength and durability, and is highly prized by the higher classes amongst the Chinese. *Paulownia imperialis*, *Lilium japonicum*, and several other well known Japanese plants, are also indigenous to this part of China, which shows that the vegetation of the two countries must be very much alike.

"I arrived at Shanghai this year on the 18th of April, and spent two or three weeks there, at different times, during the season. My principal object was to see all the plants in the different northern districts as they came into flower, and it was therefore necessary that I should stay as short a time as possible in one place at one time. I have already mentioned that I purchased a collection of Tree Pæonies during my first visit in the winter of 1843 which were said to be very splendid things, and en-

tirely different in color from any of the kind which were known in England. The history of this purchase is rather amusing, and affords a curious example of the kind of duplicity which I had to contend with. I had drawings with me of various Moutan Pæonies, which were said to exist in the country: and when these were shown to a Chinese nurseryman in Shanghai, he said he could get them, but that they were only to be procured at a place called Soo-chou, distant nearly a hundred miles, and that it would be rather expensive to bring them down. I asked him how many kinds there were, what were the colors of their flowers, and finally expressed a wish to have a certain number of each. He told me very gravely, that he would undertake to send to Soo-chou for them, providing I would pay him at the rate of a dollar for each plant. I was too anxious to get them to make any objections to the price, which, after all, was not much out of the way, if they were to be brought about a hundred miles. In the stipulated time, the plants were delivered to me in excellent order, and the money was paid. They were then taken down to Hong Kong, and dispatched to England, where they arrived in very fair condition. I had, of course, no opportunity of seeing their flowers at that time, and was now, (April, 1844,) anxious to get some more in flower, and intended to send my old friend back again to Soo-chou for another collection, stipulating, however, this time, that all the plants should be in flower, in order that I might have an opportunity of seeing their colors. One morning, however, as I was going out into the country, a short distance from Shanghai, I was surprised by meeting a countryman with a load of Moutans in full bloom. The flowers were very large and fine, and the colors were dark purples, lilacs, and deep reds, kinds of which the very existence was always doubted in England, and which are never seen at Canton. Dr. Lockhart, an excellent Chinese scholar, being with me at the time, we soon found out the name of the Moutan district; and from the state of the roots in the man's basket, I was quite certain that the plants had not been more than an hour or two out of the ground, and that, therefore, the distance from Shanghai could not exceed six or eight miles, a surmise which we afterwards found to be perfectly correct. This was, doubtless, the place where my nursery friend had procured his plants in the autumn before, and where he would have gone again, had I not been lucky enough to find that I could easily go there myself. Indeed, I afterwards discovered there was no Moutan country in the vicinity of Soo-chou, having met a man from that place in the Shanghai district, where he had come for the express purpose of buying Tree Pæonies to take home. I was now out in the Moutan district daily, during the time the different plants were coming into bloom, and secured some most striking and beautiful kinds for the Horticultural Society.

"Several very distinct and beautiful Azaleas were added to my collections during this summer at Shanghai, as well as many other plants of an ornamental character, which have not yet been described. Many of these things are expected to

prove hardly enough to thrive in the open air in this country, and others will make excellent plants for the green-house. My researches this year were extended for some distance into the interior, which is interested in all directions by canals—in fact, the canals in the north of China are the highways of the country, and the boats are the carriages. The heat, during the months of July and August, was very oppressive, the thermometer frequently standing at 100° Fahr. in the shade.

"In the autumn, after the seeds which I had marked, were ripe, I got my collections together, and sailed for Hong Kong, in order to make my shipments for England. These consisted of twenty-one glazed cases of living plants, and one bag of seeds, which were sent home in four different vessels. Many of the plants were, of course, duplicates of the best species which were shipped in the spring of the same year; but a number of them were now sent for the first time. Amongst the latter, the following may be noticed as arriving in England alive for the first time:

Tree Paeonies, with purple and lilac flowers, etc., (twenty plants.)	<i>Campanula</i> sp. (blue.)
<i>Spiraea prunifolia</i> , flore pleno, sp.	<i>Portulaca chinensis</i> .
<i>Calyptegia pubescens</i> , flore pleno.	<i>Lycopodium wilddenovii</i> , <i>cresum</i> .
The Chinese five-colored Rose.	<i>Gardenia florida</i> , var. <i>fortuniana</i> .
<i>Rosa</i> sp. (a curious anemone-flowered kind.)	<i>Pans</i> sp., from Japan.
<i>Edgewoodia chrysanth.</i>	Ningpo.
<i>Hydrangea</i> sp. from the woods of Tsen-tung.	<i>Juniperus</i> sp., north of China.
<i>Rhynchospermum jasminoides</i> .	Bamboos, (northern varieties.)
<i>Acer</i> sp., from Japan.	<i>Viburnum</i> sp.; these are fine shrubs, with large round heads of flowers, like the
Mandarin Orange, (true.)	Gouldres Rose.
	Shanghai Peach, (a fine large variety.)

and several other plants to which I cannot at present give any names.

"The last shipment at this time, was made on the 31st of December, 1844. As it was still winter in the northern provinces, and as nothing could be done in the south, I determined to go over to the Philippine islands for a few weeks, and accordingly sailed for Manilla in the beginning of January, 1845. As far as I had an opportunity of judging, the vegetation of Luçon is a great resemblance to the Island of Java, and other parts of the Malay Archipelago. In the woods I was surprised to find so many species of the genus *Ficus*; I should imagine that nearly one-half of the indigenous trees belong to this family.

"After some trouble, I discovered the locality of the beautiful *Phalenopsis amabilis*, and procured a large supply of the plants for the Society. As my visit here was a secondary object, I had very little time to spare, and therefore took every means in my power to make the most of my time. I was in the habit of making an Indian's hut in the wood my head-quarters for a certain time, where I held a sort of market for the purchase of orchidaceous plants. The ground in front of the hut was generally strewn with these plants in the state in which they had been cut from the trees, and often covered with flowers. The *Phalenopsis*, in particular, was very beautiful at this time. I was most anxious to get large specimens of this plant, and offered a dollar, which was a high sum in an

Indian forest, for the largest specimen which should be brought to me. The lover of this beautiful tribe of plants will easily imagine the delight I felt, when I saw two Indians approaching with a plant of extraordinary size, having ten or twelve branching flower-stalks upon it, and upwards of a hundred flowers in full bloom. 'There,' said they, in evident triumph, 'is not that worth a dollar?' 'You have gained the dollar,' said I, as I paid them the money, and took possession of my prize. The same plant is now in the garden of the Horticultural Society; and although a little reduced, in order to get it into the plant case at Manilla, is still by far the largest specimen in Europe.

"I found few other plants of value, except perhaps two species of *Aërides*, which I have never yet seen in flower; these, however, with some other *Manilla* plants, are now in the garden at Chiswick. Upon reference to the garden lists, on my return, I find that out of four cases of *Manilla* orchideous plants, no fewer than forty-five specimens of the *Phalenopsis* have been given away to the Fellows of the Horticultural Society.

"My allotted time having expired, I sailed for my old station in the north of China, and arrived there on the 14th of March. My principal object now was to make another collection of all my finest plants, which I intended to bring home under my own care. I had written to the secretary of the Society, requesting to be favored with full returns of the state in which my various shipments had arrived in England, and these lists were now coming to hand by every mail. When I found from these lists, that any of the species were perfectly safe, I discarded them from my collections, and only kept the kinds which were either newly discovered, or those which we had been so unfortunate as to lose during the voyage, or which, if not lost, were in doubtful condition.

"Foo-chow-foo, a large city on the river Min, was visited this summer, for the first time, as well as some of the black tea districts in that part of the province of Fokein. The plants in this district, with a few exceptions, were the same as I had already found either in the south or in the northern part of the empire. This was naturally to be expected, as this part of the country lies about half-way between the province of Quantung in the south, and that of Keangsoo in the north of China. When my examination of the country was completed, there was no English vessel in the Min, and I was therefore obliged to take a passage in a Chinese junk, which was bound for the city of Ningpo. On our voyage up the coast, we were attacked by fleets of pirates on two different days, and had I not been well armed, we must have fallen into their hands, where, in all probability, my career would have been soon terminated. I had a severe attack of fever at the same time, and altogether was in a most deplorable condition when I reached Chusan where my countrymen were stationed. Having the greater part of my collections in the country near Shanghae, I was most anxious to know in what state they were; and finding an English vessel about to sail for the Yang-tse-Kiang, I immediately crawled on board in the best way I

could, and, with a fair wind, we soon reached our destination. It would be unjust and ungrateful not to mention here the kindness and hospitality of Messrs. Mackenzie, Brothers, and Co., merchants in Shanghai, whose house was open to me as my home, and where, by the skill of Dr. Lockhart and Dr. Kirk, the fever gradually left me, and I was enabled to attend to my collections.

"In addition to the plants discovered last year, I obtained about this time some valuable species from Japan. Every means had been used during my early visit to Shanghai, to induce the Chinese nursery-gardeners to import for me Japan plants in the junks which annually trade between Champoo and that country. Several collections had been brought me, but none of any value until this autumn, when some Azaleas and other plants of much interest arrived.

"The whole of my plants from the districts of Foo-choo-foo, Chusan and Ningpo, being now brought together at Shanghai, I got them packed, and left the north of China for the last time on the 10th of October, on my way to Hong-Kong and England. When I arrived at Hong Kong, I despatched eight glazed cases of living plants, the duplicates of which, and many others, I intended to bring home under my own care. I now went up to Canton, and took my passage for England; and with eighteen glazed cases, filled with the most beautiful plants of Northern China, sailed on the 22nd of December. We arrived in the Thames on the 6th of May, 1846, having been three years and three months absent from home.

"The plants arrived in excellent order, and the following kinds, amongst many others, may be noticed as having been imported this year for the first time:

Glycine sinensis, with white flowers,	Pinus sp., from Japan, two varieties,
Azalea obtusa, from Japan,	Oak from Chusan,
" sp. from Japan,	Camellia hexangularis (true,) Camellia 'star,' (?) a variety of hexangularis,
" four species from the north of China,	Spiraea sp.,
Prunus sinensis (flore pleno albo.)	Lycopodium sp., ('Man neen chung,' of the Chinese,)
Dielytra spectabilis,	Kum-quat, a curious small orange,
Berberis (mahonia) fortunei,	130 plants of Tree Pæonies, consisting of twelve or fourteen varieties, having flowers of various shades of purple, lilac, dark red and white,
Scutellaria sp., (a fine herbaceous plant with blue flowers.)	Seeds of the true Shantung cabbage—a very valuable northern kind.
Rose, the fine double climbing yellow.	
Rose, double white climbing variety,	
Rose, dark red do.	
Rose, purple garden kind,	

"The number of plant-cases altogether amounted to sixty-nine, besides packages of seeds, some of which arrived in better condition than could have been expected, and others in worse. As all my fine plants were sent several times, I find, upon looking over my lists, that there are only two of value which have really been lost to the country: the one is a Rosaceous shrub, found on the hills of Chekiang, and the other is a curious Ranunculaceous herbaceous plant obtained in a garden near Shanghai; there are dried specimens of both amongst my specimens in the garden of the Horticultural Society, which may one day lead to their being again introduced."

Notes on "Packing House Salt" for Manure.

BY WM. B. ODDIE, PIERMONT, N. Y.

I CANNOT recommend too highly the advantages, for application to gardens and orchards, of the *refuse salt* obtained from the packing houses. I have not, as yet, arrived at a positive analysis of this fertilizer; but as blood, and small particles of bone in a putrescent state, are among its component parts, you can form some idea of its value as a manure, added to its utility as a destroyer of insects in the larva state.

You recommend common salt, as a top-dressing in fruit orchards, as being "strongly disagreeable to nearly all this class of insects," Curculio or Plum-weevil, and an excellent recommendation it is.

The olfactories of insects in general, appear to be wonderfully acute, therefore the

compound to which I allude, having an exceedingly powerful and offensive odor, is particularly obnoxious to these troublesome intruders. I put less than a quart round each peach tree, and then gave the field a top-dressing, at the rate of six bushels to the acre, after planting potatoes in the drill. My peaches are in the most healthy and fruitful condition; and I am now digging the crop of potatoes, and as yet have found no sign of disease, although the very next field is affected. When I have housed the whole, I will send you the result, feeling quite sanguine that a good and sound yield will class me among the fortunate.

To those of your readers, who may be desirous of getting this manure, and test-

ing its properties, I will remark that any of the packing houses in New-York will be glad to dispose of it, at about twenty-five cents per barrel, unless a demand may induce them to raise the price.

Salt is a wonderful food for plants, and strange to me is it that none of the agricultural clubs have called the attention of farmers to the importance of its use. Another time, I can give you my experience in its application to meadows, etc.

The advantages of the salt which has been previously used in packing meat, are, I feel certain from my own experiments, very considerable. As a fertilizer, the animal matter mixed with it being large, it is greatly increased in value; while being considered a refuse article, it may usually be obtained at such prices as render it one of the cheapest manures.

WM. B. ODDIE.

Piermont, N. Y., Sept. 15.

FRUITS IN OHIO.

BY W. H. SCOTT, TOLEDO, OHIO.

No part of the world would appear better adapted to the growing of fruits than that portion of the West, extending from latitude thirty-five to latitude forty-one, having for its eastern and western boundaries the Alleghanies and the Mississippi river. We would narrow down still more, by saying that the tier of counties bordering on the south shore of Lake Erie, are better suited to the successful growing of the fruits of a temperate climate than any portion of the Mississippi or Lake valleys. The advantage which northern Ohio has over other portions of the country, is, that while the soil is warm, rich, and easily cultivated, and the climate suited to all the standard fruits, the influence of frosts in destroying newly formed fruit, is felt less injuriously so near to this great body of water than any where else, where the advantages of soil and market are as good. Every portion of the country may grow certain fruits successfully; but few portions are alike favorable for all our standard fruits. The pear thrives in the country around Boston. The peach is largely and profitably cultivated in New-Jersey and Delaware. But the peach does not succeed well around Boston, and the

pear is not at home in Delaware. Taken as a whole, Ohio presents more facilities for fruit culture, we venture to say, than any state in the Union. A large portion of our fruits, in their native form, grow wild in the greatest abundance and luxuriance, and many of them, in their natural state, as the grape, strawberry and raspberry, are well worthy of removal to the garden.

Along the Ohio river, the grape is cultivated to perfection, and the peach, pear, apple, plum, raspberry and strawberry, are grown with ease; still there is much less certainty of their bearing regularly than on the lake shore, as a glance at a statement of the fruit seasons in the two portions of the state would show.

The southern exposures of the hills upon the Ohio, cannot be excelled in natural advantages for grape culture by any part of the vine-growing portions of Europe. The wine from some of the numerous vineyards along the Ohio, may be placed in comparison with the best Rhenish, without disparagement. Protection in winter is not found necessary for the best native wine-grapes. The strawberry is taken into the market of Cincinnati, in greater perfection and in lar

ger quantity, than into any of the larger cities east of the Alleghanies. Mr. LONGWORTH of Cincinnati, who has much merit as a horticulturist, has, probably, the most extensive vineyards in the country. His fourteen vineyards contain about seventy acres, and are mostly under the care of Germans, who have been familiar with vine-growing and wine-making in their own country. He prefers the northern exposures of the hills, and thorough ploughing to trenching. His attempts to acclimate the foreign grape have proved unsuccessful, and more reliance is placed on our native varieties, many of which answer well both for wine and table use. He plants his rows in the vineyard six feet apart, and his plants from three to four feet in the row, and cultivates with the plough. Mr. LONGWORTH has been also a prime mover in the question of the distinction of sex in the strawberry plant, and has driven, with a steam power, most of his opponents from the field.

Comparatively little attention has been

paid to the cherry in southern Ohio, and the same may be said of this fruit all over the state; though there are few portions which are not well suited for its culture. The same remarks apply to the pear. Probably more and finer varieties of the cherry are exhibited at the Cleveland Horticultural Society's shows, than can be found elsewhere.* Apple orchards are multiplying rapidly in most of the counties, and a great disposition is exhibited to change the numerous seedlings into palatable fruit. When England becomes an important market for Ohio apples, as it probably will before many years, the superior advantages afforded by the Lake region, over other parts of the state, must render it the great apple-growing portion. One of the advantages we have already referred to; the other is the easy water communication afforded for shipment to the Atlantic, through and by Lake Erie, the Welland canal, Lake Ontario and the St. Lawrence, without necessity of transshipment.

Toledo, Sept. 27, 1846.

W. H. SCOTT.

GIANT MEXICAN CACTUS.

THERE is, perhaps, no country, excepting Central Africa, that naturalists have at all penetrated, which is richer in rare, novel, and interesting plants, than Mexico. The variety of soil and climate embraced within its limits, is very great. Sandy, arid deserts—rich, deep watered valleys—high, cold mountainous tracts—all abound, each covered with its appropriate vegetation.

The Royal Garden at Kew, near London, has lately received from Mr. STAINE, a collector employed in Mexico, some specimens of the Cactus family, which are of enormous proportions.

The district where Mr. STAINE found

these monster Cacti, is in the neighborhood of San Luis Potosi. The division of the Cactus family, called *Echinocactus*, Hedgehog Cactus, (from *echinos*, a hedgehog,) is naturally almost entirely confined to Mexico, and abounds in gigantic proportions in the neighborhood of San Luis Potosi.

The first large specimen, which Mr. STAINE sent to the Kew gardens, proved to be a new species, and was named by Sir WM. HOOKER, *Echinocactus stanesii*, in honor of its discoverer. It was the largest of the

* One-third more varieties were shown at the Dutchess County, N. Y., Horticultural Society's exhibition in June last, all of the finest quality—Black Tartarians three inches in circumference.—ED.



Fig. 60. *The Giant Mexican Cactus, (Echinocactus stanselii.)*

genus ever seen in Europe, weighing, when the roots were entirely free from earth, about two hundred and fifty pounds. Fig. 60, from the *Revue Horticole*, gives an accurate view of this species. It arrived at Kew in excellent condition, and a short time afterwards produced from its apex about one hundred fine orange-colored blossoms, resembling those of *Opuntia*. We are sorry

to add, however, that it has since decayed and perished.

This first plant, however, is but a pigmy compared with one which Mr. STAINE has since forwarded to Kew. The "latter monster" specimen, was selected among great numbers which grow in the district referred to. It was necessary to employ twenty men, with the aid of levers, to raise this

great thorny plant upon the car or chariot, which was to transport it to Vera Cruz, the nearest seaport. The weight of this remarkable specimen was about four hundred pounds.

Mr. STAINE describes these Cacti as growing in deep ravines, among masses of rocks situated in the high mountains of Mexico. The finest specimens are in places where it is impossible to reach them with a carriage, and it is done with difficulty even on horseback. Some of them, which he measured, were nine or ten feet in height. When we reflect how slowly this family of succulent plants grow, there is little doubt that these gigantic specimens of Mexican Cacti are some of them several hundred years old.

The Cactus tribe, as such of our readers as are familiar with Mexican products are aware, is not a family of plants merely curious to the botanist or plant collector. On one of the species, *C. cochinillifera*, the Cochineal insect feeds, that insect which produces the splendid scarlet dye, so well known in commerce. Mexico has the entire monopoly of this product, and the fertile district of Oaxaca is that in which it is chiefly cultivated. Some idea of the value of this little red insect, apparently so insignificant, may be obtained, when we mention that the annual export of it now amounts to above one million of dollars, and, according to Humboldt, two millions dollars worth of it have been exported in a single year.

HOW TO RENOVATE AN "OUTCAST."

BY J. B. W., NEW-YORK.

It is very rarely that experiments are properly made or accurately reported. The following one, on a subject highly interesting to every cultivator of the *Pear tree* on the sea-board, appears to us highly satisfactory in both respects.

Such of our readers as are familiar with the Appendix to our work on *Fruits*, are well aware that we do not believe in the natural "running out" of varieties. In other words, we are confident that wherever a variety, once productive and excellent in a certain soil, fails, it is for the want of certain conditions necessary to its success. Either it has exhausted the soil of those constituents necessary to health and productiveness; or, if the tree is a young one, and immediately shows signs of decay, it is evident that it has been propagated from an unhealthy and diseased stock.

The hints we gave our correspondent below, were based on some chemical notions, which were only vague theory then, but which subsequent observations have given us greater confidence in. The renovating substances that we recommended in this case, were intended to be adapted to the peculiarities of the soil of J. B. W.; but all the alteration which we are able, even now, to suggest for other sites, would be to substitute air-slaked *lime* for *charcoal*, in heavier soils, that are naturally deficient in the former substance.

The salts of iron, and especially *sulphate of iron*, has a specific action upon the disease which attacks, in unfavorable soil or climate, the epidermis of the pear and other plants, both on the leaf and fruit. Observations of the occasional results of blacksmith's cinders, applied to this tree, in va-

rious parts of the country, first drew our attention to this fact. We have lately seen a paper, read before the Academy of Sciences at Paris, by M. BOUSSINGALT, bearing directly on the diseases of plants as affected by the salts of iron, which confirm and extend our own crude views on this subject. The substance of this essay we shall, at some convenient moment, lay before our readers.

In the mean time, we beg the attention of our readers to the plain and simple mode adopted in the experiment below. If, as we are convinced, a tree, which some have condemned as an "outcast" from pomological society, may be renovated so easily as this, it is quite worth while to "spare" it. The quantities of the substances added to the soil to renovate it, were, it should be remembered, applied to a tree nearly *full grown*. One half, one-fourth, or less, should, of course, be used to trees of correspondingly less size and age.

A hint may be taken from this treatment of old trees, for the better culture of young ones on soil naturally unfavorable.—Ed.

.....

To the Editor of the Horticulturist:

You will remember the conversation we had together three years ago, about the apparently worn out condition of my Virgalieu or St. Michael (*Doyenné*—Ed.) pear trees. I spoke of them then, in the language of Knight and Kenrick, as "degenerate outcasts." Though they had once borne me excellent crops of fruit, which I have never seen surpassed, yet for several years they had only produced cracked, blighted, miserable fruit—indeed such as was absolutely worthless.

I remarked to you, that I considered the variety worn out, and good for nothing in my neighborhood, and that I intended to cut down my trees, which were large and fine, and ought to yield every year several bushels.

My situation is a sheltered one in Westchester county; and after some inquiries about my soil, which is a light, though excellent, sandy loam, you told me that you believed the trees had exhausted the proper elements from the soil; that in consequence the fruit failed, and recommended me, instead of cutting them down, to renovate them.

Struck with the force of your reasoning at the time, which I have not leisure now to repeat to your readers, I determined to make a trial with two trees. I did so, in the fall of 1843. I have now the pleasure of repeating in writing, what I told you verbally, that I have now had two crops of beautiful fair fruit, as excellent as the finest that grew upon my soil twenty years ago.

As many persons about New-York and Long-Island, have trees of the Doyenné or Virgalieu pear in the same degenerate condition in which mine were, I comply with your request to give a simple statement of my proceeding with my trees, premising in the outset, that it is entirely based upon the hints I received from you.

In the month of October, 1843, I took in hand two large and thrifty Virgalieu pear trees, about twenty or thirty feet in height. I first scraped off all the rough outer coat of bark, and coated the trunk of the tree over with soft soap, put on with a paint brush. I next cut out about one-third of all the poorest branches, and shortened the head of the tree one-third, by "heading back" the principal limbs, covering the wounds after paring them, with the "shell-lac solution," (the best thing I have ever tried,) recommended on page 32 of the "Fruits and Fruit Trees of America."

I then dug a trench, four feet wide around the whole ball of roots, very much as if I were going to transplant it. I left a ball of roots, *b*, untouched about six feet in dia-

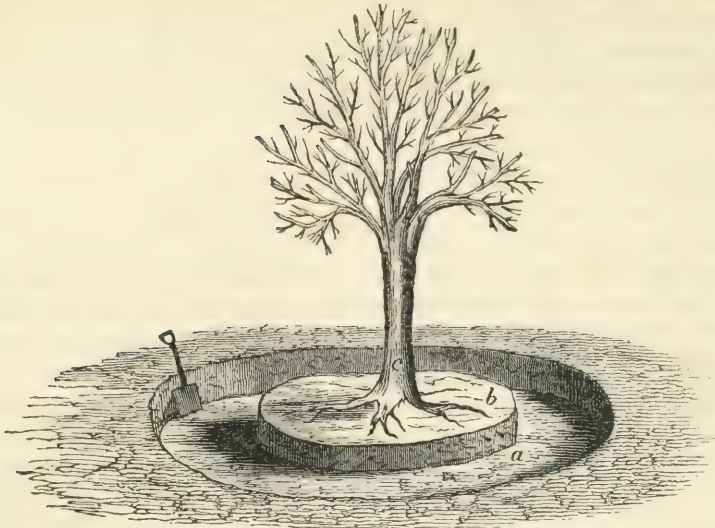


Fig. 61. Renovating an "Outcast" Pear Tree.

meter. The roots—all the roots, large or small—that extended beyond this ball, I cut off; and I should judge that I cut off about one-third of the roots; or, as you advised me, about an equal proportion to the branches reduced.

The trench itself, which was four feet wide, I dug twenty inches deep; and carted away all the old soil from it to another part of my garden. I next carted in an equal quantity of soil from a field of good pasture, where the sod had not been broken up for several years. I drew this earth, composed pretty largely of the sod itself, and filled the trench around both trees.

To each tree I then applied the following substances, viz., two bushels of refuse or scoræ from a blacksmith's forge, two bushels of charcoal pretty well broken, and two pounds of potash well pulverized. These substances I had on the spot, and mingled them with the fresh soil as it was put in the trench. After the trench was full of soil containing these stimulants, I had the whole of its contents thoroughly intermixed,

by turning them over and over again with the spade. This is the whole of the process. Now a word about the results.

The first summer after the trees had been operated upon—that of 1844, I was surprised and delighted with the luxuriance and vigor of the new growth. It was very healthy, and had the appearance of that of a very fine young tree. Suffice it to say, the tree had formed a new and handsome head.

Next season, 1845, it blossomed moderately. But almost every blossom set, and gave me a fruit. Every fruit, to my great joy and satisfaction, was large, fair and smooth; the growth was clean and healthy, and the leaves dark green in color.

This year, I have had a fine crop: two bushels from one tree, four bushels from the other. They were superb fruit—genuine, old-fashioned Virgalieus; and I cannot doubt that my trees will continue to bear such for many years.

I need not say, that I and many others are convinced by this experiment, that the

pear tree, of many sorts in my neighborhood, have failed from a want of proper sustenance in the soil. Whether the recipe you gave me, may be improved upon or not, I cannot say; but I can say, that, so far, it has answered perfectly; and it is my belief that every old and enfeebled pear tree, that bears cracked fruit, may be restored to good health and a fine bearing condition by following the same rules. J. B. W.

REVIEWS.

GREENWOOD ILLUSTRATED: *in a series of Picturesque and Monumental Views, from drawings taken on the spot, by JAMES SMILLIE. The Literary Department by N. CLEVELAND.* New-York. Published by H. MARTIN. 4to. Part I. and II.

WHAT a beautiful work! is the involuntary exclamation which bursts from one's lips on opening the first two numbers, just issued, of this publication. Fair broad margins, admirably executed line engravings, and scholar-like and refined letter press, all original, fresh, and wearing the best stamp of the native mint—this is really refreshing in these days of cheap and flimsy reprints, magazine scrap plates, and wholesale literary robberies. "Greenwood Illustrated," as a tasteful book, (if, as we doubt not, the future numbers bear out the rich promise of these before us,) we consider something to be proud of. We scarcely know any similar publication, produced even by luxurious and wealthy England, that is superior to it.

The work is one which appeals strongly to the finer sentiments, and not to the utilitarian feeling of the day, and we chronicle its advent, in so perfect a form, as one of the many signs of the deep under-current of feeling, which sway silently, yet powerfully, the heart of the nation, showing plainly enough to those who care to observe, that the passion for the "almighty dollar," prominent as it may appear on the surface, has not destroyed in the hearts of the people any of that warm current of

tenderness, love of poetry, nature and art, that distinguish the civilized man from a rude and barbarous inhabitant of the Feejee Islands.

When half a century more shall have elapsed, we imagine it will be found that, in sentiment and art, the Americans evince a feeling as profound, and an aptitude as striking, as now distinguish them for fertility of invention and irrepressible energy. It is not, while half a nation is busied in clearing forests, and building up settlements, that one can hope for the highest results of civilization in the remainder.

In the mean time, it is not a little remarkable that the United States possess, at this moment, three rural cemeteries far superior to any in the world. We do not state this in any vain spirit of boasting, or on our own information merely. A friend, who has watched the progress of this subject in America, who is greatly interested in rural cemeteries, and who has, within a year, visited Europe almost expressly for the purpose of comparison, assures us that neither *Père le Chaise*, nor any other rural cemetery on the continent, or in England, will, for one moment compare, in all that constitutes the highest elements of beauty in such a spot, with *Mount Auburn*, *Greenwood* or *Laurel Hill*—the three great rural burial places of Boston, New-York and Philadelphia.

We place Mount Auburn first, because to

the inhabitants of Boston belongs the credit of first showing this country how beautiful and consoling a spot "God's acre," (as the old Germans expressively call the burial ground,) may be made. The burial ground—alas! for too long a time that sad and desolate place, open to the garish eye by the highway and in the crowded streets, overgrown with thistles and briars, and calculated only to render more painful and revolting the final decay of the poor discarded tenement of the soul!

Mount Auburn was the first to show our people how soothing and benign the influence upon the living, rural beauty may exert even in the last resting place of the dead. It is only fifteen years since that place was consecrated by the eloquent and touching address of STORY, yet so rapidly has the appreciation of its beauty and fitness extended, that we can now name quite a number, many of them of great beauty, in various parts of the country. Indeed, almost every one of our larger towns or cities at the north, now points to its rural cemetery as one of its most interesting features.

Greenwood, we feel bound to say, is the finest rural cemetery in America, and, we may add, in the world. It is not yet equal to Mount Auburn in monuments; it is not superior to it in its interior of leafy woods and dells, but it is pre-eminent in a certain *breadth* that belongs to it; and especially in extent, in position, and in the grand ocean view that it commands.

From Mr. CLEVELAND's introductory remarks, we quote some paragraphs on the salutary influences of cemeteries, and the selection of the site of Greenwood itself.

"The idea of a rural cemetery, sufficiently remote to be beyond the range of city improvements, yet so near as to be of convenient access, seemed to reach at once, all the necessities of the case. Large enough for the wants of many generations,

it furnishes, in its guarded enclosure, full security against those violations of the grave, by which the zeal of science or of gain has so often shocked public sentiment and deeply injured the feelings of survivors. The vault, so unpleasant to many, might indeed be found here, but it would no longer be the inevitable resting-place of the departed. Hither wounded Affection could resort, attracting no notice and dreading no intrusion. Here Sorrow could bring its graceful offerings, and Taste and Art join with Nature herself in adorning the last home of the loved and lost. To its silent solitudes the thoughtful would come to meditate, here the man of business and care would often reassure his hesitating virtue; and here, amid the thousand witnesses of mortality, and in all the soothing influences of the scene, the gay and reckless would read lessons of wisdom and piety.

To the importance of this reform, New-York, though somewhat slow to move, could not but at length awake. If any where the evils alluded to, were obvious and vast; if in any city better accommodations were imperatively demanded, that city was emphatically this great and growing metropolis. Again and again, in the progress of improvement, the fields of the dead had been broken up to be covered with buildings or converted into open squares. The tables of death showed that already nearly ten thousand human bodies must be annually interred, while calculation made it all but certain that in half a century more the aggregate would be told in millions.

"The island of New-York, presenting no secure, or at least no very eligible spot for a cemetery, attention was turned to a large unoccupied tract in Brooklyn, lying near Gowanus Bay. As if providentially designed and reserved for the very use to which it has been put, it would be difficult to name a particular in which these grounds could have been better adapted to that use. Within sight of the thronged mart, and not three miles from its busiest haunts, Greenwood enjoys nevertheless perfect seclusion. It is of ample extent, and there is hardly a square rod of it which may not be used for burial. Its numerous avenues and paths furnish a long and delightful drive, presenting continually scenes of varied beauty. Now you pass over verdant and sunny lawns—now through park-like groves, and now by the side of a tangled and unpruned forest. At one moment you are in the dell with its still waters, its overhanging shade and its sweet repose. At the next, you look out from the hill-top on the imperial city with its queenly daughter—on the bay so beautiful and life-like—down into the quiet and rural hamlet, or beyond it on the distant ocean."

To those who have not yet seen Greenwood, these engravings, from the highly artistical burin of SMILLIE, will convey a very faithful impression of many of its lovely sylvan scenes, interspersed with fine monuments, and diversified by winding lanes. Greenwood has been well laid out, we be-

lieve, chiefly by Major DOUGLASS, whose skill and taste are well known. The several buildings erected for the purposes of the place, are designed in a simple and quiet rural style, which meets with our hearty approval. The "Keeper's Lodge," is the subject of one of the engravings in Part I., and Mr. CLEVELAND's description, which accompanies it, is a pretty and truthful reflex of the beauty of the view, and the moral feeling which it awakens in the mind.

"On the left of the avenue, and just beyond the entrance, stands the keeper's lodge. It is a cottage in the rustic, pointed style, with four gables. The sides are of plank uprights, battened with cedar poles, rough from the forest. Its whole exterior is unsmoothed and unpainted—yet it is symmetrical and picturesque. Embowered in the grove, and already looking old enough to be coeval with the trees that shade it, its entire aspect is in harmony with the place and its associations. In such a home, we sometimes imagine, might have been found, long ago, near the church-yard of some quiet hamlet in our fatherland, one of those immortal sextons, whose occupation and quaint humor genius has loved to depict.

"Hard by, a tower of the same primitive order, supports a bell, which is rung whenever a funeral train enters the grounds. This is a custom hallowed by its own appropriateness, as well as by long and general observance. In cities, the tolling of bells for the dead has, as a matter of necessity, been long discontinued. In country villages, however, the usage still prevails. The deep tones of the bell in Greenwood, penetrating its dells, and echoing from its hills, are the only sounds that reach the mourner's ear, as he follows some dear object to the tomb. Often, we know, at such times, this unexpected but still familiar sound has touched the springs of memory and feeling, carrying back the mind to the homely scenes, but bright hours of childhood—to the far-off native vale—to that knell from the village steeple, which once called the reminiscent to weep over some sweet flower, cut down in its morning beauty—and to that humble grave-yard, where, bedewed with tears of veneration and love, a father and mother now sleep."

Many of the monuments in this cemetery are of that soft brown sandstone used in the construction of Trinity Church, and we have noticed a few—as, for example, some on Ocean Hill, in a bold and massive style, which are both original and good.

It is not a little remarkable that the Land-

scape Gardening taste of the country should, at the present moment, appear most fully developed in our rural cemeteries. In the main, they are admirably laid out and well kept. The original growth of wood is well treated, the individual lots prettily planted with flowers and shrubs, and the general effect is park-like, or highly picturesque.

The only point broadly open to criticism, is the mode of *enclosing* a majority of the lots held by individuals. The exhibitions of *ironmongery*, in the shape of vulgar iron railings, posts and chains, balustrades, etc., all belonging properly to the front-door steps and areas of Broadway or Chestnut-street, and for the most part barbarous and cockneyish in their forms, are totally out of keeping with the aspect of nature, the repose, and the seclusion of a rural cemetery. A collection of such barriers, such as we have especially noticed at Laurel Hill, goes far to destroy all the harmony and rural beauty of the scene.

When an iron fence is made the means of enclosing a cemetery lot, it should always take the simplest and most unobtrusive form. One does not desire a display of florid iron castings in such a scene. It is an open violation of the spirit of nature that breathes around. A low hedge, neatly kept, of Arbor Vitæ, Privet, or that hardy, compact and charming little Rose, the Double Burnet (Double White Scotch,) will always be an harmonious and agreeable mode of marking the limits of proprietorship in a secluded sylvan scene like our cemeteries.

To those who can afford to buy illustrated works of this class, we cannot too cordially commend GREENWOOD ILLUSTRATED. It is a work highly creditable to New-York and to the country in every respect.*

* The following is the plan of publication :

"The work will be published in Parts, each containing three beautiful line engravings, for 50 cents, or proof impressions,

A MANUAL OF ROSES, comprising the most complete history of the Rose, including every class, and all the most admirable varieties that have appeared in Europe and America, together with ample information on their culture and propagation. By WILLIAM ROBERT PRINCE. New-York. Published by the Author. (12mo. 213 pages. 75 cts.)

THE title of this little volume sufficiently explains its character. The Rose, as our readers well know, has undergone such an improvement in the hands of scientific cultivators, within the last ten years, chiefly by hybridizing, that it is now the favorite flower of *all seasons of the year*. Dahlias, which formerly held up their proud heads, the undisputed glory of the gardens in autumn, have, it cannot be denied, fallen out of favor at the court of Flora, since the fine classes of autumnal roses—*Bourbons* and *Hybrid Perpetuals*, have made their appearance.

This is an excellent manual of Roses, and its excellence is chiefly owing to the fact, that it is in the main a reprint of *Rivers' Rose Amateur's Guide*, with such additions as the author's experience could suggest. MR. RIVERS stands at the head of the English growers of the Rose, and has so thoroughly written out the subject, that there is little more to be said at present. Indeed, Mr. PRINCE says, in his preface, it has been the desire of the writer of the present little volume, to combine in its pages, every item of knowledge that is comprised in that valuable work, and he adds, "to extract from

every other source, whatever additional information was attainable."

The volume contains not only a brief description of all the most remarkable varieties, but directions for the propagation of Roses, forcing, culture in pots, and general culture in the open garden.

Those who do not know Mr. PRINCE will be able to gather some idea of his profound filial piety, and his literary taste, from the dedication of this volume, which we copy.

"TO THE
MEMORY OF MY FATHER,
THE LATE
WILLIAM PRINCE, OF FLUSHING.

THE first work penned by this hand, since that fated hour when thou sankest into the tomb, I now inscribe to thee! thus dedicating the aspirations of the mind to the source whence their power emanated.

"To me the encomiums of the living are naught; I seek not their plaudits, which, if received, would pass me by like the idle breeze—heeded not.

"But to thee, oh my Father! rises at all times the soul-felt devotion, which the remembrance of thy manifold kindnesses, and of thy ever-pervading purity of feeling, which stamped thy mind above all other men, is alone capable of inspiring. Rest! Rest, my Father, from the toils of life in the regions of peace; or in the sublimated enjoyment of another transition in the chain of existences, so oft by thee recounted; where—oh! where—the enlarged intelligence and expanded conceptions of a more glorious sphere, are destined to reward the well spent life; by unveiling to the enraptured imagination the perfections of the Deity, and the magnificence of the Universe.

"WILLIAM ROBERT PRINCE."

.....

TWO HUNDRED DESIGNS FOR COTTAGES AND VILLAS, etc., original and selected. By THOMAS U. WALTER and J. JAY SMITH. Philadelphia. CAREY & HART. 4to. (Published in four numbers of about 30 plates each, price, complete, \$10; or \$2.50 per number.)

THIS work, now in course of publication, the first part of which is before us, we consider a timely contribution to the stock of *matériel*, every day in greater demand among those of our citizens who desire to build ornamental cottages.

The greater part of the designs in this number are selected from Loudon, Robinson, Goodwin and other English writers on

on large paper, for \$1, to be completed in six Parts, making the whole expense \$3 for the general, and \$6 for the proof edition. Payable on delivery of each part.

It is sold to subscribers at a rate so near the cost of publication, that the public may rest assured that it will never be obtained for less than the present price.

"The work being published under the auspices of the Greenwood Institution, is not issued under the ordinary circumstances of bookseller's publications, and will only be furnished to those who pre-engage it before completion. It will contain, at the end, a catalogue of the names of every individual possessor of the work."

Domestic Architecture; but there are also a few original designs by Mr. WALTER, the well known architect of the Girard College, and others.

The designs are in outline merely, and are usually accompanied with ground plans of the principal floor. They are not, however, accompanied with any descriptions of the buildings, the object being rather to present a *great number* of examples, some good, and some of course indifferent, allowing each individual to use his own fancy in selecting, than to direct and form the taste by models especially adapted to this country. We copy the following explanatory remarks from the preface:

"From the designs now presented, the incipient builder, who, perhaps, has paid little attention to detail, may discover what it is he requires, and be thus enabled to render his work an agreeable object of taste. The professional man, surrounded by costly works of art, when he inspects our book, may at once say, that amid some original designs, he recognises much that he is familiar with; but before he condemns our labors, he will also probably remember how difficult to procure, and how expensive to import, are the works from whose treasures we have drawn for the information imparted; and that though the engravings in question may be in his possession, how few persons in America can command access to them; and on reflection, he may feel disposed to join the many in expressing his surprise that no similar book has heretofore been presented to the public in any part of the world; most of which have been published on the subject, containing from a dozen to thirty plates.

Of course, in such a variety as we have presented, there is something that is faulty, as well as much to admire; by combining, altering or adding, each individual may procure a residence, tasteful and convenient in its interior, as well as ornamental and agreeable to the eye."

This is asking from the architecturally uneducated person, who turns over a variety of designs, a good deal of the highest inventive powers of the best architect, for we think no houses so positively bad as those *made up* by such persons, from odds and ends that are borrowed from half a dozen different designs.

There are, however, several pleasing cottages and villas in this work, and we shall look with interest to the succeeding parts.

Now that the taste is fairly awakened, there will soon be no lack of designs for the public attention. The advice in this matter, that we wish to give our readers, who are about to build, is, never to forget *simplicity, fitness and truthful expression*, in their houses.

Small cottages, ornamented with *battlements*, like castles in confectionary, or the roofs stuck full of little gables, as if knocked into so many "cocked hats," or oppressed with wooden Corinthian columns, mongrel caricatures of the immortal Greek temples, we have no toleration for. Let our readers beware how they build them, for the public taste in this country, will soon be matured to that point that they will neither be relished nor admired.

In the mean time, if they are about to build, let them examine as many different plans as they can get access to, and such works as the present will materially assist them.

In selecting a design, as regards decoration and style, let them err rather on the side of simplicity, than complex ornament. It is much in building as in the minor matter of dress—gay colors and tawdry ornaments captivate the vulgar eye—the refined taste selects only such as reason, fitness, and good sense fully approve. Any one, now-a-days, can get up a rickety wooden box with Gothic ornaments, but only a clever architect, or a man of good taste and good sense, can design a dwelling, which shall charm every one by its beauty of proportion, its chaste ornament, and its perfect fitness for the locality it is to adorn.

THE AMERICAN FLOWER GARDEN COMPANION, revised and enlarged. By EDWARD SAYERS. Third Edition. Cincinnati. J. A. JAMES. 1846. (12mo. 207 pp. 50 cts.)

THIS is a very useful little volume for the novice, containing brief practical directions for the culture and management of all the most popular denizens of the flower garden. It is written in a plain and simple style, and is an excellent *first book* for those just be-

coming interested in floriculture. From its having reached the third edition, we presume it has been found, by the inhabitants of Cincinnati and the West generally, a timely and acceptable manual. Mr. SAYERS is well known as a practical gardener, and many excellent hints in this volume are drawn from his own observations and experience in this climate.

LITERARY NOTICES.

I. OUR friend, DR. WM. DARLINGTON OF Pennsylvania, well known as an accomplished botanist, is, we are gratified to be able to announce, preparing for the press an AGRICULTURAL FLORA, in which only those plants most interesting to the farmer, for their useful or pernicious properties, are to be described. It will be written in a popular style, and will no doubt be a very valuable guide to such of our farming population as are little versed in the science of Botany, yet desirous to know something more of the plants and trees that surround them.

II. The colored edition of our *Fruits and Fruit Trees of America*, which has been delayed for some time by the loss of the instructions which accompanied the original drawings abroad, is now in progress, and will be published in very handsome style, early in December, by WILEY & PUTNAM, New-York.

III. The *seventh edition*, (plain) of this work on Fruits, will be put to press shortly. Several errors, which subsequent experience

has detected, will be corrected in the forthcoming edition; and it will be rendered as perfect as possible in the present state of our pomological knowledge.

In the autumn of 1847, it is proposed to publish a SUPPLEMENT to the *Fruits and Fruit Trees of America*, containing descriptions of all new fruits of merit, which have proved worthy of notice, since the preparation of the original work. This will enable us to make use of all the materials collected during the present season, and (*Deo volenti*) the coming one; and we shall hope to continue to receive from our kind friends and correspondents, in various parts of the country, specimens and notes, regarding any native fruits of local origin, which they deem of *first-rate quality*, that may come under their observation—that we may ourselves form an opinion of their merits.

IV. We observe that a second edition has been issued in Paris of M. BOITARD's work, "*L'Art de composer et decorer les jardins.*"

FOREIGN NOTICES.

A LONDON CRITICISM.—The English justly stand at the head of all nations in the beautiful art of Landscape Gardening, and the *London Art Union*, a journal of reputation, devoted to the Arts, is rather chary of its praise of American productions. We may be pardoned, therefore, for not being insensible to commendations like the following, which we find in a late number of that periodical. It is extracted from a review of the 2d edition of our *LANDSCAPE GARDENING*:

"If it was with some misgiving that we first opened this volume, such feeling quickly gave way to cordial approbation; for it is one that has very agreeably disabused us of some prejudices and misconceptions, by convincing us that sound criticism and refined taste, in matters of art, are not confined to this side of the Atlantic. Mr. DOWNING has here produced a very delightful work; one that must be welcomed even in this country as a valuable addition to what we ourselves already possess on the same subjects, and which cannot fail to prove of equally extensive and beneficial influence in America, where quite a new territory is opened for the exercise of the art of Decorated Landscape Scenery, and its architectural accompaniments. The encouraging reception the book has met with, is itself a gratifying proof that the author's countrymen possess a relish for the elegant and humanizing pursuits he treats of; and should they obtain from him some of the generous enthusiasm with which he regards this "old world" fatherland of ours, there would be less bitterness and asperity on our side and on the other.

"We have at least introduced to our readers a work which, such of them as are at all interested in gardening, planting, or building, will become not only acquainted, but familiar with, as a judicious instructor and agreeable companion."

.....
WORDSWORTH'S FAVORITE FLOWER.—Mr. Wordsworth is fond of the Hollyhock, a partiality scarcely deserved by the flower, but which marks the simplicity of his tastes. He had made a long avenue of them of all colors, from the crimson brown, to rose, straw-color, and white, and pleased himself with having made proselytes to a liking for them among his neighbors.—*Foreign Cor. Tribune*.

.....
THE STANWICK NECTARINE.—Fruit of this new and extraordinary production was received August 29, 1846, from the Right Hon. Lord Prudhoe, in whose garden at Stanwick-park it had ripened. His lordship obtained the variety from stones given him by Mr. Barker, formerly Her Majesty's Vice Consul at Aleppo, and now residing near Suedia, or Souadiah, in Syria, whose favourable climate is peculiarly suitable for the cultivation of Asiatic and European fruits. A year or two since he brought to this country, amongst other things, Peaches and Nectarines with sweet kernels—such varieties previously unknown in Europe, and probably never heard of till their existence was an-

nounced by Mr. Barker. The Nectarine forming the subject of this notice, is about the size of an Elruge, and like it in shape, except in being less heart-shaped at the base. Its skin is pale, like that of the White Nectarine, where shaded, with a violet tinge next the sun. The flesh is white, exceedingly tender, juicy, rich, and sugary, without the slightest trace of the flavor of prussic acid. The stone is middle sized, ovate, with rather a prominent sharp edge, very rugged, and of a chocolate colour. The kernel is sweet, like a nut, imparting nothing of the bitter-almond flavor. The fruit of the Peach and Nectarine, partaking so much as it does of the qualities of the bitter-almond, must have been very deleterious in its unimproved state. Mr. Knight, who himself succeeded in producing a melting Peach from an Almond (figured "*Hort. Trans.*," vol. iii. p. 1,) states that the Tuberes of Pliny must have been swollen Almonds, or imperfect peaches; and Duhamel has given an account of a fruit which accurately corresponds with this description, being sometimes produced by a variety of Almond-tree in France. Mr. Knight adds: "The bitterness, in this case, I conclude can only arise from the presence of the prussic acid, and as this acid, without being extracted by distillation, operates very injuriously upon many constitutions, some explanation appears to be given of the cause why the Peach was reported to possess deleterious qualities when it first came from Persia into the Roman empire."

"Strigantur calathi et pomis, quæ barbarâ Persis
Miserat (ut fama est) patriis armata venenis."

Columella, lib. 10.

The varieties of the Peach and Nectarine now generally cultivated, retain but little of the injurious properties ascribed to the species by ancient authors; and, when well ripened, they can be generally eaten with impunity, notwithstanding the slight prussic acid flavor which pervades even their luscious sugary juice; but some constitutions are liable to be effected by this trace. It was, indeed, considered unlikely that amelioration would be carried much farther. For at least a century little improvement has been effected, and in every variety the kernels have proved intensely bitter. But at last this is overcome; in the specimen above described, the deleterious quality considered inherent in the species has disappeared; and Mr. Barker himself informed me that his fruits with sweet kernels may be eaten as a full meal, in quantities at any time of the day, and repeatedly, with perfect safety. Mr. Crawford Baillie, gardener to Lord Prudhoe, has furnished the following additional memorandum concerning the Stanwick Nectarine: "The Stanwick Nectarine was raised from seeds sown in March, 1843, and budded the same autumn on the Bellegard Peach. In 1845 a few flower-buds were produced near the ends of some of the strongest shoots, but the wood not being sufficiently ripe, they proved abortive. The tree on its own roots is a strong and robust grower, and

continues to grow late in autumn, and has hitherto retained its leaves throughout the winter. I have no doubt, however, that when worked upon Apricot, Plum, or Almond stocks, it will prove quite hardy, and bear well, even in the north of England. I may mention that the Nectarine is 14 days later than the Peach upon which it was worked."—*Journal of the London Horticultural Society.*

BATTLE OF THE BEES.—On Thursday afternoon, the 18th, a farmer in the neighborhood of Twyn Barlwm mountain, watching his flocks, when suddenly his attention was attracted by a buzzing noise, and a cloud of insects, almost to darken the air. Upon closer examination he found the multitude engaged in serious warfare, which lasted a considerable time, until heaps of the vanquished covered the ground, some without heads, others minus their wings, and others completely separated into two parts. They proved to be different sorts of the humble bee and honey bee. A friend assured me that he scraped together three or four bushels with his foot, and many persons carried away the slain in basketsful to show to their friends the result of this very unaccountable warfare.—*Monmouth Merlin Paper, Sept. 19.*

FOREIGN STRAWBERRIES.—A vessel named the Hannah, which has arrived at the port of Hull from Memel, had, with other productions, 15 cases of Strawberries on board. This is a novel article of importation from the place named, the produce of Prussia; and whether, with reference to the place of growth, or the late period of the season for the supply of the article, is as singular and remarkable an importation as we have of late had occasion so frequently to record.—*Gardener's Chronicle.*

PROTECTING TENDER ROSES.—For protecting Bourbon, Chinese, Tea-scented, and other Roses, on their own roots, nothing can be better than moss procured from shady banks or woods. It should be placed round each plant, one or two inches from the stem and branches, not closer, and about nine inches or a foot thick. This prevents the ground from being frozen; and although the tops of the shoots may be killed, they grow vigorously from the root on the return of mild weather. This covering may be applied early in December, [or as soon as the ground commences to freeze slightly.—Ed.,] and may remain around the plants till the end of March, or even later, if a cold backward spring.—*Rivers' Catalogue of Selected Roses.* 1846.

LOVE OF FLOWERS, AND THE FLOATING GARDENS IN MEXICO.—We have been making excursions all round the country, especially early in the morning, before the sun is high, when the air is delightfully cool and refreshing. Sometimes we go to the Viga at six in the morning, to see the Indians bringing in their flowers and vegetables, by the canal. The profusion of sweet peas, double poppies, blue bottles, stock gilliflowers, and roses, I never saw equalled. Each Indian woman, in her canoe, looks as if seated in a floating flower garden. The same love of flowers distinguishes them

now, as in the time of Cortes; the same which Humboldt remarked centuries afterwards. In the evening, these Indian women, in their canoes, are constantly crowned with garlands of roses or poppies. Those who sit in the market, selling their fruit or their vegetables, appear as if they sat in bowers formed of fresh green branches and colored flowers. In the poorest village church the floor is strewn with flowers, and before the service begins, fresh nosegays are brought in and arranged upon the altar. The baby at its christening, the bride at the altar, the dead body in its bier, are all adorned with flowers. We are told that in the days of Cortes, a bouquet of rare flowers was the most valuable gift presented to the ambassadors who visited the court of Montezuma, and it presents a strange anomaly, this love of flowers having existed along with their sanguinary worship and barbarous sacrifices.

We went the other evening on the canal, in a large canoe, with an awning, as far as the little village of Santa Anita, and saw, for the first time, the far famed Chinampas, or floating gardens, which have now become fixtures, and are covered with vegetables, intermingled with flowers, with a few poor huts beside them, occupied by the Indians, who bring these to the city for sale. There were cauliflowers, chile, tomatoes, cabbages, and other vegetables, but I was certainly disappointed in their beauty. They are, however, curious, on account of their origin. So far back as 1245, it is said, the wandering Aztec or Mexicans arrived first at Chapultepec, when, being persecuted by the princes of Taltocan, they took refuge in a group of islands to the south of the lake of Tezcuco. Falling under the yoke of the Tezcuacan kings, they abandoned their island home, and fled to Tezapan, where as a reward for assisting the chiefs of that country in a war against other petty princes, they received their freedom, and established themselves in a city, to which they gave the name of Mexicalingo, from Mejitli, their god of war,—now a collection of strong barns, and poor huts. But they did not settle there, for, to obey an oracle, they transported themselves from this city to the islands east of Chapultepec, to the western side of lake Tezcuco. An ancient tradition had long been current amongst them, that wherever they should behold an eagle seated upon a nopal (prickly pear,) whose roots pierced a rock, there they should found a great city.

In 1325 they beheld this sign, and on the spot, in an island in the lake, founded the first house of God—the Teocali, or Great Temple of Mexico. During all their wanderings, wherever they stopped, the Aztecs cultivated the earth, and lived upon what nature gave them. Surrounded by enemies, and in the midst of a lake where there are few fish, necessity and industry compelled them to form floating fields and gardens on the bosom of the waters.

They weaved together the roots of aquatic plants, intertwined with twigs and light branches, until they had formed a foundation sufficiently strong to support a soil formed of the earth which they drew from the bottom of the lake; and on it they sowed their maize, their chile, and all other plants necessary for their support. These floating garden

were about a foot above the water, and in the form of a long square. Afterwards, in their natural taste for flowers, they not only cultivated the useful, but the ornamental, and these small gardens multiplying, were covered with flowers and aromatic herbs, which were used in the worship of the gods, or were sent to ornament the palace of the emperor. The Chinampas along the canal of the Viga, are no longer floating gardens, but fixed to the main land, in the marshy grounds lying between the two great lakes of Chalco and Tezcuco. A small trench full of water separates each garden; and though now in this marshy land, they give but a faint idea of what they may have been, when they raised their flower crowned heads above the clear waters of the lake, and when the Indians, in their barks, wishing to remove their habitations, could tow along their little islands of roses, it is still a pretty and pleasant scene.—*Calderon's Mexico*.

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SUPERB MEXICAN ORANGE GROVE.—In the evening we drove to the orange grove, (near Huatepec,) where *three thousand* lofty trees are ranged in avenues, literally bending under the weight of their golden fruit and snowy blossoms. I never saw a more beautiful sight. Each tree is perfect, and lofty as a forest tree. The ground under their broad shadows is strewn with thousands of oranges, dropping in their ripeness, and covered with the white fragrant blossoms. The place is lovely, and everywhere traversed by streams of the purest water. We ate a disgraceful number of oranges, limes, guayavas, and all manner of fruits, and even tasted the sweet beans of the coffee plants.

We spent the next morning in visiting the coffee mills, the great brandy works, sugar houses, &c., all which are in the highest order; and instrolling through the orange groves, and admiring the curious and beautiful flowers, and walking among orchards of loaded fruit trees—the calabash, papaw, mango, tamarind, citron,—also mameys, chirimoyas, custard apples, and all the family of the zapotes, white, black, yellow, and *chico*; cayotes, cocoas, cacahuates, aguacates, &c., &c., a list without an end.

Besides these, are an infinity of trees covered with the brightest blossoms; one with large scarlet flowers, most gorgeous in their coloring, and one whose blossoms are so like large pink silk tassels, that if hung to the cushions of a sofa you could not discover them to be flowers. What prodigality of nature in these regions. With what a lavish hand she flings beauty and luxury to her tropical children!—*Madame Calderon's Mexico*.

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TRANSMISSION OF BULBS.—Considering the number of bulbs which are annually brought to this country from very distant foreign parts, it is a matter of some importance to know the best means of preparing them for transmission. Some bulbs, received from India, had been experimentally prepared, and were sent to the garden of the Horticultural Society for examination. We learn from the Society's *Journal*, that one half the bulbs were simply wrapped in cotton, while the other portion (the same kinds of bulbs) were incased in a kind of white-wax, and covered with cotton like the

others. When received in June, 1844, those which were simply wrapped in cotton and brown paper, had emitted roots, and the tops in most cases had grown considerably; while those coated with wax remained quite firm, and as fresh as when first packed, although they had been confined in the wax three months. The bulbs transmitted in cotton began to grow first; one soon showed symptoms of debility; while those sent in wax did not push till a month after they were potted, but then they grew strong and healthy. In one or two cases the bulbs perished in the cotton, while the same kinds packed or coated in wax survived the journey.—*M., in the London Hort. Magazine*.

.....
NEW VEGETABLE: RHAFLOWER.—Mr. A. Forsyth, the Earl of Shrewsbury's gardener, at Alton Towers, in Staffordshire, suggests the use of the flower stalks of *Rhubarb* as an excellent addition to our list of culinary vegetables. He says—"We have been in the habit of eating the leaves (foot-stalks) of the *Rhubarb* plant for many years; and seeing that the fruit stalks were counted as waste, I thought it very likely that they were the better part of the plant, and I now find that the pouches of unopened flowers, [i. e., compact clusters of buds.—*Ed.*] bear the same relation to the leaves of *rhubarb*, that cauliflowers do to cabbage leaves, and may be obtained in great abundance, and that at a time—April—when all kinds of vegetables are valuable. The pouches of flower buds are of a beautiful colour, when dressed in the same manner that *rhubarb* is usually dressed, and resemble the inside of a fig; the flavor is milder than that of *rhubarb* stalks; but I do not look upon it so much in the light of an article for making *tarts* of, as I do for its use as a *boiled vegetable*, to be used like *Brocoli*. Let no one take my opinion of this matter, but let every one judge for himself, in the spring, as soon as the flower stalks show themselves. As a matter of course, the plants should be grown in rich ground, and the pouches to be crisp should be got very young, and will require some care in cooking.—*London Hort. Mag.*

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FOREIGN CORRESPONDENCE.—*Paris, Sept. 10.*—The Potato blight has been for some time past gradually extending in the western and southern districts of France; every week adds some new locality. Last year the principal scene of infection was in the north; beyond Amiens to the frontier of Belgium almost every field was more or less damaged, and in some districts a sound Potato was hardly to be found; it was also, but in a modified form, in some parts of Picardy, Normandy, and on the borders of the Rhone; now the crops are all but lost in some of the lowlands of Calvados, Normandy, Touraine, on the Garonne, about Toulouse, and from thence to the Mediterranean; in several places near the Rhone, at Chamberry, and other parts of Sardinia and Italy, the loss is still more extensive; in all these districts the late kinds have suffered most; at present I have not heard that it has made any progress in central France; in the neighborhood of Paris, we are almost entirely free from taint. I have from time to time visited the various markets and seen but very

little; in fact, no disease among the early kinds; as to the later varieties, but very few have yet been taken up. The season has been so exceedingly dry and hot during the months of June, July and August, that the crops cannot be otherwise than deficient, and I am perfectly certain that around Paris there will not be half an average crop, I might even say one-fourth. The red spider, thrip, and drouth, have done almost as much mischief as the blight; good kinds are selling from 8 to 12 francs the 100 kilos—(6s. 6d. to 10s. for 200lbs.) All kinds of vegetables and fruit (with the exception of Melons, Grapes and Walnuts,) are at least one-half dearer than last year. I have just returned from a tour throughout the whole length and breadth of Belgium and Rhenish Prussia, which I am happy to say present a very different appearance to what they did last autumn; then a sound Potato was scarcely to be seen, which, added to the shortness in Rye and Oats, created an almost universal alarm of famine; not only Potatoes, but Turnips, Carrots, and every kind of grain, are generally good, and not far from an average crop. From Courtrai to Ghent the farmers are everywhere busy getting up the late crops, rather from fear of wet weather than actual necessity. Early Potatoes are abundant in the markets of this last place, and almost entirely free from specks. The price asked for red kidneys was 10 and 12 francs the sack of 200 lbs.; late kinds did not look so well, and sold from 7 to 10 francs. Towards Antwerp there is said to be a full crop of kidneys, and perfectly sound; but I saw many places where the blight had evidently attacked the late ones. At

Bruges and West Flanders fear was entertained for those still in the ground, although actual disease had not exhibited itself to any great extent. At Brussels I saw none in the fields, and those in the markets looked sound. At Malines and Louvain the people were all busy, and the yield seemed good. A friend living in an agricultural district, near Malines, told me that he had not seen or even heard of any disease among the early Potatoes, and that generally the farmers were satisfied with the crops. Last season they were everywhere destroyed. Further east, towards St. Trond and Liege, I was told that here and there they were bad, but I saw nothing of it. I went into a field that was being dug up, and certainly did not see a single root tainted; on the contrary, they appeared plentiful, full sized, and sound. In this neighborhood last year the disease was universal, and in its worst form. The present prices are 6 to 8 francs round, and 7 to 12 francs for the kidneys. Towards Aix and Cologne they did not look so good; the stems appeared in many places blighted. At Frankfort, I understand, the late kinds are partially affected; but by no means so much as last year. From what I have myself witnessed in the north of France and Belgium, I am fully persuaded there will not be one-fourth of the loss of 1845, and I find from a report just made by the Government committee sitting at Ghent, that they entertain but little fear either as to quantity or quality, and that it is expected there will be at least 7-10ths of the crop saved, while last year the loss was at least 8-10ths of the whole.—*Gardner's Chronicle*.

DOMESTIC NOTICES.

PEACHES IN WESTERN NEW-YORK.—Your distant readers should understand that the term "Western New-York," has two significations: a whig, when boasting of large political majorities, refers to that part of the state lying west of Cayuga bridge; but when spoken of as a fruit-growing region, a strip along the southern shore of Lake Ontario, about a hundred miles long and forty wide, should limit its meaning. To the east, south and southwest of that district, the climate and soil are such that the finer fruits do not flourish, except in a few locations. In and near the valley of the Genesee, we are signally favored, and boast much of the vigor of our trees, and the quality and quantity of our fruit. Most of the storms and cold winds that come sweeping down Lake Erie, pass over our heads or down the Niagara river and Lake Ontario, leaving the latter at its southeastern shore, making that district and the corresponding one of Lake Erie nearly similar in climate and productions. Canada raises but little fruit: thus markets are open all around us, accessible by means of the lake, our canals and railroads.

Our peach trees do not bear heavy crops as

young as they do in Delaware and New-Jersey, but to counterbalance that their life is several times as long; in fact we do not consider an orchard in good bearing at an age when our southern neighbors find theirs worn out. With good care, a peach tree twenty years old would not be considered superannuated; though few attain that age because they break down from the weight of fruit accumulated at the ends of their long branches, or become so unsightly from the want of proper heading back, that they are removed to make room for a younger stock—but diseased they seldom or never are. In a few instances, trees brought here from New-Jersey have died of the yellows; but with the tree perished the disease, and I do not now know a single one which has a symptom of that malady. The best peach orchard in this county was set several years since with trees from an infected district, but it has never exhibited a trace of the yellows, and produces fruit that would be admired even in the markets of New-York and Philadelphia.

This season has been early and generally favorable. The market of Rochester opened on the

12th of August with the Early Purple,* a specimen of which I sent you a few days since. From that time the favorite varieties have been the Early Anne, Honest John, Royal Kensington, Yellow Alberge, Walter's Early, and Crawford's Early Melocoton; to-day the Oldmixon Freestone makes its appearance, selling readily at \$2 per bushel. The price of these varieties cultivated with care, has been from \$2 to \$5 per basket. For a few days \$1 only was received, except for selected Crawfords and Kensingtons. Our careful cultivators find no difficulty in selling their fruit at good prices, while those who neglect their trees, except to mow the hay under them once or twice in the summer, may hawk their sour peaches through the streets at fifty cents a bushel, and find a dull market even at that price.

In early days, *i. e.* some fifteen or twenty years since, good peaches were plenty here in their season at from twenty-five to fifty cents a bushel, but they were not raised by those who devoted much attention to the subject; consequently their trees perished from neglect, and the prices of the fruit did not, in their estimation, warrant the setting out of young orchards. Now our market is supplied from orchards carefully cultivated; our fruit is not merely good, it is *first rate*. With the quality have improved the demand and price, though the latter will undoubtedly be somewhat reduced, when the thousands of young trees set within the past few years come into bearing. In the mean time the knowing ones are reaping golden harvests, well earned and well deserved. Yours truly, J. W. Bissell. Rochester, Aug. 8.

A BUDGET OF QUERIES.—*Dear Sir*: What proportion of common tar, mixed with milk, will make a paint that will protect nursery trees against rabbits, and yet be harmless to the trees? [Ans. Just enough to give it the consistency of paint.—Ed.]

I have tried several times to produce the Black Spruce Fir from the seed of young trees, say from five to nine feet high. I shake them from the cones, and cover them over lightly in a good soil; but I have never yet been able to make them sprout. Will the seed from trees of that size vegetate? Do any or all evergreen seeds require soaking to make them sprout? What is the management necessary to grow most kinds of evergreens from the seed? Where can good seed be obtained? [Ans.—The seeds of evergreens, in order to vegetate, must be sown in autumn, as soon as they are ripe. A deep mellow border must be made in a shady situation. Sow the seeds upon the top of the well pulverized soil, and then cover them very lightly with some very fine sand or leaf mould from the woods. Afterwards cover the surface of the bed with branches of evergreens till spring, when they should be removed and the seeds will vegetate. The only certain mode of getting evergreen seeds to vegetate, is to plant them in large shallow boxes, which are about six inches deep.

* Not the true *Early Purple*, but probably our *Early York*, a serrated leaved peach, and on the whole not surpassed by any early variety.—Ed.

After the seeds are sown in these, as just described, place the boxes in a cold frame, *i. e.* a mere empty frame covered with glass, on the north side of a fence or building. Here they may remain till spring, when the lights should be taken off. Here also the boxes should be allowed to remain all the next season, and watered as often as they appear dry. In this way nearly every seed will vegetate, and the plants will be fit to transplant into the nursery rows the ensuing spring.—Ed.]

Would you consider it safe to transplant the peach, or any other tree, the first spring after inoculation? [Scarcely. The inoculation should grow one year before transplanting. But with care they may be removed in the bud.—Ed.]

What one variety of strawberry would you recommend as best adapted to extensive culture for market? [Hovey's Seedling and Black Prince.—Ed.]

Not being a botanist, I am desirous to know whether a certain kind of thorn that grows in this neighborhood, is what you call the Buckthorn; or whether it is the same as any other kind of thorn for hedges, noticed or described by you. Growing alone, it forms a round compact head, seldom reaching a greater height than ten or twelve feet. When not clipped or eaten off, the branches are uniform in size, generally grow round a centre stem, are numerous, and well supplied with single straight thorns. The blossoms are small, white, and in clusters; the leaves are smooth, glossy, and evenly serrated. The fruit is small, round, and is now (Sept. 15) of a light red color, but unripe. It contains one and two seeds. I send you some leaves, by which, with the description, you may possibly recognize and name it. I have seen small bushes of this shrub, that had been nibbled off by sheep and cattle, that were almost impenetrable to a bird. For a hedge it has many advantages over the Honey Locust, among which are its more compact and even habit of growth, and its being much less disposed to throw up distant suckers. If I were to select some native plant which is pre-eminently valuable for a hedge plant (as a fence not for ornament alone) I would point unhesitatingly to this thorn. But its claims to beauty are not few. In spring its blossoms are quite ornamental, and in midsummer its dark and glossy leaves and dense foliage render it very beautiful. Its principal fault is, that it drops its leaves early, but then the red fruit is pretty and conspicuous. [The leaves sent us appear to be those of the *Crataegus crus-galli*, commonly known as the Cockspur or Newcastle thorn, a native species of Hawthorn. The description given of the plant also corresponds with this species. It is one of the very best of all thorns for hedges in this country. In some parts of the country—those long cultivated—the borer is fatal to all the species of Hawthorn, and hence, in such districts the *Buckthorn*, a totally different plant, is preferred. It is very rapid growing, hardy, and no insect will touch it.—Ed.]

Your remarks on the Yellow and Seed Locusts, in the July number of the Horticulturist, were very opportune. I was about to plant out a nursery of seed locust for post timber, supposing it to be the Yellow Locust. I used to hear much of

the *Yellow* and *Black Locust*, but in making particular inquiries, in order to distinguish them, I could not find out whether the one cultivated here was the yellow or black; and I had concluded it was the yellow. Your reply to W. H. F., however, makes it clear that it is the *Seed Locust*.

It has been a matter of surprise to me and to many others, that you should speak so lightly, in your "*Landscape Gardening*," of the claims of the *Locust* as an *ornamental tree*. Since it has been cultivated here, it has been considered the most beautiful of all trees of its size in this climate. Its exceedingly vigorous and rapid growth, when quite young—the ease with which it is transplanted—and the light, airy, and graceful luxuriance of its dark green foliage—render it deserving of the rank it has taken, as the favorite tree of this region. *F. J. Scott. Toledo, Ohio.*

[If our correspondent will wait till the *Locust* attains the age of fifty or sixty years, he will agree with us in our estimation of the *Locust* as an *ornamental tree*. Nothing can well be prettier than the *Locust* for the first ten or fifteen years after being planted—and we have cheerfully borne testimony to the freshness and varied beauty of its tints at that time. But as a full grown tree, the *Locust* is undeniably meagre and poor when compared with the grand and massive *Oaks*, *Elms*, *Maples*, and other fine trees which belong to this country.—Ed.]

THE PAULOWNIA.—We saw while visiting the gardens of Messrs. PARSONS & Co., of Flushing, L. I., that their largest specimens of this new ornamental tree, we believe the oldest in the country, has formed clusters of fine *flower buds*, which may be expected to open next April or May. This will, we presume, be the first tree of the kind to flower on this side of the Atlantic.

A specimen of the *Paulownia* in our own grounds has made a leading shoot this summer 18 feet long. Some of the leaves measured two feet and a quarter across. The general habit of the tree, however, is much like that of the *Catalpa*.

RAPELJE'S SEEDLING PEAR.—DR. STEVENS of New-York, has favored us with the following notice and outline of a pear, which appears to be a variety of merit. Another season, we hope to see specimens of the fruit, that we may be able to judge of its excellence ourselves.

Dear Sir—I wish to make known, through your valuable publication, the existence in this neighborhood, of a seedling pear, of unsurpassed excellence, and which, as I am informed, is entirely unknown to any of our commercial gardeners. It is now ripe, 15th Sept. In size and flavor, much like the *Doyenné blanc*, the favorite old *Virgalieu* of our market, now become scarce. Its color, when fully ripe, is a brownish yellow or russet. Its form is peculiarly beautiful. If it be divided on a plane, about two-thirds of the distance from the insertion of the stem to the calyx, the stem end will form a regular pyramid, the other moiety a half sphere. The stem is long, not inserted into a depression, and the calyx is very slightly hollowed. I have budded it on quince stocks, and shall

be happy to furnish you with cuttings in due season. I am very truly yours, *Alex. H. Stevens. Astoria, Long-Island, 15th Sept. 1846.*

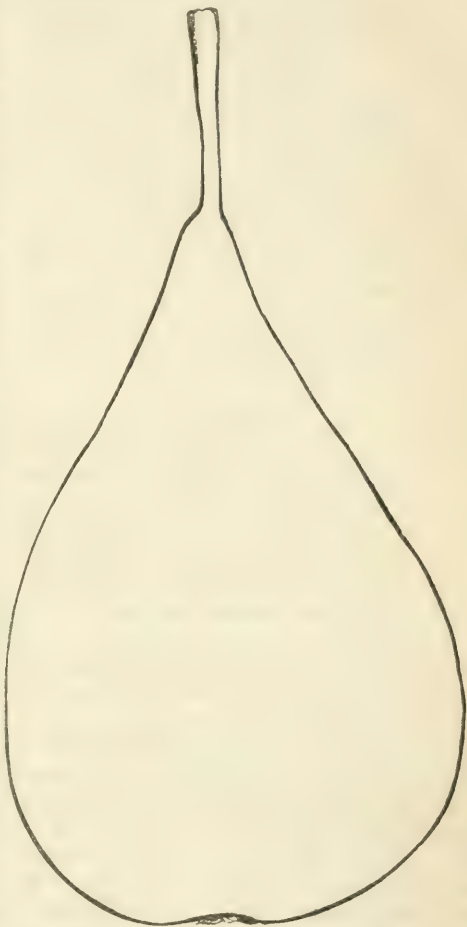


Fig. 62. The Rapelje Seedling.

P. S. Can you give me any information on the cracking and hardening of pears? I have lost all my *Virgalieus* by this malady this season. This leads me to hail with particular pleasure the advent of the *Rapelje Seedling*, which worthily replaces it. *A. H. S.*

Dr. Stevens will find the article in this number, on "renovating outcasts," exactly to meet his wants.—Ed.

HORTICULTURAL NOTES TAKEN AT PLYMOUTH.—Having learned that there was to be an exhibition of the Plymouth Horticultural Society, now in its infancy, and having never, (to our confusion and shame be it said) visited Plymouth Rock, we took

the cars on Saturday last, and soon found ourselves in that ancient place, so dear to the recollection of every true American. We could not take an observation until we had placed our feet upon the far-famed rock. Having performed our pilgrimage to that place, and visited some other interesting localities, we proceeded to the hall where the exhibition was to take place. We were not a little disappointed at the small number of inhabitants who seemed to be interested in the exhibition, and the small number of contributors; but what was lacking in interest in the multitude, was made up by the enthusiasm of a few men of taste, and by the remarkably fine specimens of pears and other fruit. We can truly say that we have never seen an equal number of dishes of fruit at an exhibition of the Massachusetts Horticultural Society, where there were so many perfect specimens.

From Col. Thomas, President of the Society, there were exhibited the Heathcot, St. Michael, Seckel, Iron, St. Ghislain, Beurre Diel, Pitts' Marion, Marie Louise, Napoleon, and Swan's Egg Pears; also Peaches.

From Jos. Cushman, Seckel, Louise bonne de Jersey, Bartlett, and Duchesse d'Angoulême Pears; also Nectarines grown in the open air, (fine specimens;) and extra fine Isabella Grapes, highly colored; Seedling Peaches, Dahlias, etc.

From G. P. Fowler, remarkable specimens of Easter Beurre and Bartlett Pears; also large clusters of Sweetwater Grapes, grown in the open air, berries very large, and free from the least appearance of Mildew.

There were fine Peaches from Messrs. Barnes and Weston.

From G. Gilbert, a fine display of Verbenas, Pansies, Double Balsams, and other cut flowers.

From A. Jackson, Bartlett and St. Michael Pears, Pumpkin Sweet Apples, etc.

From J. Washburn, Pears—Louise Bonne de Jersey, Louis, Fulton, Passe Colmar, Pitts' Maria, Easter Beurre, Napoleon, Beurre Diel, Bartlett, Catillac, Bell, Flemish Beauty, Duchesse d'Angoulême, Wilkinson and Marie Louise; Apples—Hubbardston Nonsuch, Minister and the Holmes Apple. This last variety is a native, highly esteemed as a winter apple, a great bearer, fine flavor, of a medium size. Very superior Orange or Apple Quinces, Isabella Grapes, Dahlias, Phloxes.

We noticed in almost every garden where the Pear was cultivated, that the fruit was extra large and very fair. In the garden of Mr. Fowler, who is a mechanic of small means, with a small piece of land, not more than the eighth of an acre, we saw some specimens of beautiful cultivation. He had a Sieulle Pear tree trained in the quenouille style, which we thought a model for this kind of training. It was perhaps, eight or nine feet high; the branches were made to grow in a pendant manner, by twine tied to their extremities, and brought down to the ground, and fastened with pegs; the tree formed a perfect pyramid of foliage from the ground upward, and was well furnished with fruit. Mr. F. describes the fruit to be of the first quality, and he sold it readily last year at \$1.50 per dozen. It was not now quite in eating order, but it looked very fine. His Easter Beurre pears were

of extraordinary size and beauty, as were Beurre Diels, and some few other varieties which he cultivates. His garden is directly upon the seashore, and fully exposed: soil naturally heavy, but made light by gravel and sand. The training of his Sweetwater, Isabella, and Catawba Grapes, was done in the most systematic manner. The vines are young, and were now bearing on wood trained horizontally within a foot of the ground—large clusters of fruit, composed of large berries and very fair, were kept from the dirt by a layer of salt hay. We have not seen any thing in the cultivation of the grape in the open air finer than this. The wood for the next year's crop is trained in a perpendicular manner.

In Mr. J. Washburn's garden, we were also very much pleased to see the vigorous growth of his trees, and the beauty and perfection of the fruit. He is engaged in trade and mechanical business, and devotes but a small portion of his time to his garden, and would not be called among gardeners, a very clean cultivator, but we have never seen more vigorous trees nor finer fruit. We were somewhat surprised at this at first, for the soil appeared to be a light, sandy and gravelly loam, very arid, with a southwestern exposure. We found, however, upon examination, that the soil was rich with micaceous sand, that his ground had been plentifully dressed with dock mud, and that he was careful to collect and apply to his trees, the parings of horse's hoofs from the blacksmith's, and other substances, which would account for their health and vigor. We found Mr. W. quite an amateur in fruits, and having under cultivation all the desirable pears, plums, and other fruit worthy of a place in the garden. We are pleased to see that a society has been formed in the Old Colony; that a few intelligent and persevering individuals are at the helm; that they have had their first annual exhibition, which, however humble, augurs well for the future, and of which they have no occasion to be ashamed, but otherwise; one which they may justly be proud of. We wish them prosperity and success. J. B. Boston, Oct. 1846.

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MR. IVES' NOTE ON SALT.—The short article on the plum, which I forwarded you some time since, has called forth the inquiry, "how much salt is contained in a hog's head." A Massachusetts hog's head contains *eight bushels*.

In applying salt to the land, it should be done during the winter or toward the spring, say in March, *previous to the swelling of the buds*.

I spread it upon the surface, where it remained until the ground was in a sufficient state to work, and it was then dug in to the depth of a New-England spade.

I have, the past season, used rock-weed, taken wet from the sea-shore, in planting potatoes, placing the weed in drills about three feet distant, and placing a small or cut potato at each end of the weed, and covering about four inches. The crop was good, and entirely free from the rot or wire-worm. Yours truly, J. M. Ives. Salem, Mass., Oct. 10th, 1846.

[As a remedy for the *curculio*, salt should also be applied to the surface of the ground, when the

fruit containing the insect begins to drop—usually in June. See our *Fruits and Fruit Trees*, page 269.—ED.]

THE HEATHCOT PEAR.—I send you some specimens of this most excellent native pear. I have, for some years, considered the Heathcot a variety of *first rate excellence*, equal to a good White Doyenné; the tree hardy, and a good and constant bearer. *M. P. Wilder. Boston, Oct. 17th, 1846.*

[Justice was scarcely done to this pear in our work on Fruits. It is of fine quality, and has, as Col. WILDER remarks, the excellent, hardy, vigorous and productive habit belonging to most of our native fruits—which many European sorts are deficient in. We recommend it to more general attention.—ED.]

CHRISTIANA MELON.—This is the name of a new melon possessing qualities of great merit, which has been originated by that zealous cultivator of good fruits, Capt. LOVETT, of Beverly, Mass.

It appears to be a cross between the Citron and the Netted Nutmeg melons, partaking somewhat of the characteristics of both these standard varieties.

Its superiority to all other melons for New-England, and, we may add, all the northern part of the Union, where the season is not always quite long enough for the melon, is the very short time it requires to perfect its fruit.

We have seen, this season, a square planted with this variety, in Col. WILDER's garden, Dorchester, which, for abundant product, and excellence of the fruit, would compare well with either of the two standard sorts named. Yet these Christiana melons were grown on plants *produced from seeds sown in the open hills as late as the middle of June*. The ordinary varieties, planted so late, would not have matured a single fruit in the latitude of Boston. It is easy to see, from this fact, that the Christiana melon will be an invaluable sort for northern gardens, where the Citron melon finds the season too short to arrive at its maturity at the usual time. We recommend the large seed dealers to introduce into general culture so valuable a variety.

SELECTION OF CHOICE HARDY FRUITS.—A subscriber and correspondent desires us to give him a selection of good fruits, "of hardy character," fitted for the climate of the Middle States, "such as are generally considered sorts of merit, not new or rare varieties merely, but which experience has proved really good."

We beg leave to offer him the following selection, as likely to meet his views, comprising hardy varieties, from early to late in their maturity.

Twelve Apples.—Large Early Harvest, American Summer Pearmain, Large Yellow Bough, Red Astrachan, Summer Queen, Fall Pippin, Jersey Sweeting, Porter, Baldwin, English Russet, Roxbury Russet, Rhode-Island Greening, Yellow Belleflour.

Twelve Pears.—Bloodgood, Bartlett, Beurre Diep, Beurre Bosc, Bezi de la Motte, Dix, Flemish Beauty, Heathcote, Marie Louise, Seckel, White Doyenne, Beurre d'Arenberg.

Twelve Plums.—Bleecker's Gage, Imperial Gage, Prince's Yellow Gage, Diapree Rouge, Jefferson,

Autumn Gage, Lombard, Red Gage, Washington, Purple Favorite, Frost Gage, Coe's Golden Drop.

Twelve Peaches.—Early York, George IV., Old Mixon Freestone, Red Rareripe, Bergen Yellow, Crawford's Late Melocoton, Brevoort, Coolidge's Favorite. Large white Cling, Morris's Red Rare-ripe, Favorite, Heath Cling.

Twelve Cherries.—Black Tartarian, Black Eagle, Early White Heart, Downton, Downer's Late, Manning's Mottled, Flesh-colored Bigarreau, Elton, Belle de Choisy, Mayduke, Kentish, Knight's Early Black.

In the above list we have omitted many fruits of high excellence, either because they are not of the hardest character, or because their excellence depends too much upon the care and culture they receive, to come within the prescribed limits.

NURSERYMEN'S LABELS.—I have found the following a very expeditious mode of printing labels for fruit trees, where a large number of each kind is wanted. These labels are much neater and more legible, than those prepared by the usual mode of marking with a pencil, and have altogether a more business-like appearance.

The name which it is intended to print, is set with common printing types, in a small case or chase, which may be made entirely of wood, with the exception of a plate of metal for the bottom of the types to rest upon. Common printer's ink is applied with the finger, and the strip of wood intended for the label is then laid upon the face of the types, and by means of a small wooden lever, about a foot long, and with a breadth equal to the length of the label, is made to press firmly upon them. An impression of the name is thus made as clear and distinct as a printed name on paper. About one-tenth of an inch is a convenient size for the letters; and from the legible and compact form of the name, the labels may be made much smaller than usual, and consequently be less clumsy, and not so liable to be torn off. Half an inch wide, and two and a half inches long, are sufficient dimensions for any name. A very thin coat of white lead paint upon the face of the label, previously well dried, will cause a clearer impression; but without this the letters will be sufficiently distinct for all practical purposes. The label need not necessarily be perfectly smooth and straight, as the pressure of the lever brings all parts of its face in contact with the types. Some practice is needed before perfection is reached in the printing.

A few hundred labels of each name may be printed before changing the types, in one half the time or less required for writing them, and may be kept tied up in bundles until needed for use. A few types of each letter will be sufficient and may be selected in proper proportion by any printer. *J. J. Thomas. Macedon, 10 mo., 1846.*

THE APPLE BORER.—One of the surest means to destroy the borers in apple trees, is to make a solution of potash, two pounds to a gallon of water, which must be injected into the hole, where the borer has entered, by means of a syringe, holding half a pint.

WORCESTER HORTICULTURAL EXHIBITION.—The Horticultural Society of Worcester, Mass., held their annual exhibition on the eighth of October, and, as usual, made a fine display of fruits and flowers. As it was also the annual festival of the Worcester County Agricultural Society, the day on which the farmers of the county, and numerous visitors from different parts of the state, congregated in great numbers, multitudes of visitors thronged the hall during the day, and no doubt returned to their respective homes highly pleased with what they had seen in the way of horticultural improvements, and with a determination to follow the noble example set them by their Worcester brethren. For our own part, we can hardly find language to express the gratification we experienced, in witnessing the fine spirit apparent in the members of the Society, and in the entire success that had attended their efforts in getting up a show so creditable to themselves.

In consequence of the crowded state of the hall, and the short time that could be devoted to the exhibition, we could not give the various fruits so critical an examination as we could have desired; but enough was seen to satisfy us it was an improvement over any of the previous displays by this Society, which we have witnessed, and also to confirm us in the opinion that Worcester and its vicinity can produce as fine fruits, of every sort, congenial to the climate, as can be raised in any other section of the state or country.

Pears were exhibited in great variety and perfection, including most of our select and choice sorts. Some of the specimens were very large and beautiful. We did not have time to take the names of the contributors, nor did we know who exhibited a dish of *Louise bonne de Jersey* pears, unparalleled for their size and beauty, which, without flattery, were the most perfect specimens of this delicious variety we had seen; nor do we remember who had the honor of raising those large and beautiful *Seckels*, three times the ordinary size. There were also very large *Easter Beurrés*, *Duchesse d'Angoulême* and *Dix*, from a tree five years from the bud; (this sort has the character of being a much longer time coming into bearing;) *Brown Beurre*, very large and fine; *Marie Louise*, extra fine; *Flemish Beauty*, *Urbaniste*, *Josephine*, *Capiaumont*, *Beurre Diel*, *Glout Moreau*, *Sieulle*, *St. Michael's*, *Bartlett*, *Capshaft*, *Vicar of Wakefield*, *Napoleon*, *Belle Lucrative*, *Thompson*, *Jalousie*, *St. Ghislain*, *Iron*, *Pound*, *Bezi de la Motte*, and many other varieties too numerous to mention. The show of pears was excellent, but they were, if possible, eclipsed by the greater beauty of the apples, which were very numerous, of large size and fair. We noticed, among the great number exhibited, the following sorts, viz., *The Marlborough Sweet*, a large handsome apple with dark red stripes; *Maiden's Blush*, beautiful; *New-York Spice*, very superior flavor; *Winter Sweet*, fine; *Pound Sweet*, very large; *Fall Pippin*; *Blue Pearmain*, large; *Baldwins*, three on one twig, weighing 33½ ounces; *Dutch Codlin*; *Fall Harvey*, large; a beautiful red-striped apple from *Boylston*, of medium size, in eating, flavor very fine, flesh tender, superior to the *Lys-*

com; *Roxbury Russets*, very large and fair; *R. I. Greenings*, large; *Lyseom*; *Quince Tart*, a beautiful large red apple; *Blush Sweet*; *Porter*; *Newtown Pippin*; *Yellow Sweeting*; *Ribaton Pippin*; *Nonsuch*; *Hubbardston Nonsuch*; *Pennock's Red Winter*; *Pumpkin Sweet*; *Sweet Pippin*; *Orange Sweet*; *Hapgood*; *Mother*; *Black Gilliflower*; *White Harvey*, weighing thirteen ounces, with many other varieties.

Peaches were exhibited in great variety, considering the lateness of the season; including many good seedlings, some of them fine. There were extra fine specimens of *Blood peach*, so highly esteemed for preserving, and some dishes of *Late Crawford* and other well known late sorts. Also *Nectarines* grown in the open ground, of good flavor; numerous dishes of large quinces; grapes grown under glass, as well as those of outdoor culture, including *Black Hamburg*, *Sweetwater*, *Isabella*, *Catawba* and native varieties. We noticed a few plums, also melons, and a general assortment of fine vegetables.

The floral part of the exhibition was very respectable, and consisted of *Dahlias* in great variety, *Verbenas*, and cut flowers, a large *Orange tree*, with fruit, and other plants and ornaments which we had not time sufficient to examine.

There appears to be a spirit of emulation and inquiry among the different horticultural societies of the State, that will be the means of giving to horticulture a powerful impulse. If we mistake not, some of the county societies are hard on the heels of the mother society, who must bestir herself if she desires to maintain the enviable position she now has the honor of possessing. *J. B. Boston, Oct. 10, 1846.*

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THE PLUM TREE—QUERIES.—As a subscriber, allow me a question or two regarding the plum. I have never succeeded in raising this fruit well. I have clayey or light loamy soil. Where would you advise me to plant this tree? Your friend, *G. Morris. Morrisania, Oct. 17, 1846.*

[It is always difficult to obtain crops of the plum on light soils—the curculio, the great enemy of this fruit, finding so excellent a nursery in the mellow ground. Therefore, always plant plums, if possible, in heavy land. The best crops we have ever seen, have grown on a stiff yellow clay.]

The plum that succeeds best on very light soils, and bears abundant crops, is the *Lombard* (*Bleeker's Scarlet* of some).—ED.]

THE CHERRY TREE AT THE SOUTH.—Scarcely any one here has yet been able to raise any cherries to perfection; and if you can suggest any process by which fruit can be secured, I will take it as a great favor. You know the climate of *Mobile*; the soil where I intend planting is a sandy soil, congenial to the wild cherry. Your obt. servt. *R. Haswell. Mobile, Ala., Oct. 8, 1846.*

[The sun is too powerful for the cherry at the south. Plant the trees, therefore, in a rather cool, northern exposure, as the north side of buildings, and sheath the trunks with straw. Budded on the common *Pie Cherry*, or the *Morello stock*, no doubt the finer sorts would bear and thrive better at the south than on the *Mazzard stock*.—ED.]

MASSACHUSETTS HORTICULTURAL SOCIETY.

Eighteenth Annual Exhibition.—Report of the Committee of Arrangements.

The Annual Exhibition of Fruits, Flowers, Floral Decorations and Vegetables, took place in the Hall of the Society, School-street, on Tuesday, Wednesday, and Thursday, Sept. 16th, 17th and 18th, 1886, and the Committee who had charge of the general arrangements congratulate the Society on its entire success. The weather during the three days was delightful, and the Hall was filled to its utmost capacity, a greater portion of the time by our most estimable citizens, strangers that thronged the city at that busy season of the year, and the members of the Society with their families, thus fulfilling a prediction of a former committee, that the time would soon come when a more spacious room would be required to display the rapidly increasing productions of the members of the Society. The sub-committee to whom was assigned the duty of preparing the Hall for the reception of the different products, added another centre table, which gave more space for the display of Fruits, but deemed it expedient to leave the Hall as it was left by the architect to show its own fair proportions, and not attempt any studied decorations other than such as might be offered by the several contributors in the shape of wreaths, bouquets, and Floral designs, and by a judicious disposition of them, to avoid an excess of ornament and a display of sombre green, calculated to withdraw the attention of the visitors from the really valuable contributions of the members. This course your committee believe was generally acceptable.

Three other sub-committees were also appointed, to receive and make a record of the Fruits, Flowers and Vegetables. These several committees have faithfully performed their respective duties, and made reports of the specimens offered. The report on Fruits was made by Mr. WALKER; that on Flowers and Floral Decorations by Mr. BRECK; that on Vegetables by Mr. A. D. WILLIAMS, jr.; which are incorporated in this report, and will be found below in the order enumerated, under their several heads.

REPORT OF FRUIT EXHIBITED.

The specimens of Fruit on our tables on the present occasion, exceeded in number of varieties those of any former exhibition. In the collections of the President, Messrs. French, Manning, Cabot, Cushing, Perkins, Walker, Macdonay, Winslip, Hovey, Williams, Lovett, Allen, Ives, Wight, Warren, Hyde, and others, we noticed very many specimens of extraordinary growth and beauty. It would be unpardonable to make comparisons where all was so choice, so fair, and so deserving of attention—but we cannot refrain from stating that our President takes the lead in the good work, and that others, with a zeal worthy of the cause in which they are engaged, are pressing forward in their favorite pursuit, with an energy that will crown their labors with success.

From M. P. WILDER, President of the Society, 154 varieties of *Pears*. The list having been mislaid, we quote only the following:—Alpha, Angélique de Rome, Ananas, (of France,) Ambrette, Andrews, Autumn Superb, Beurre d'Arenberg, B. Diel, B. d'Amalis, B. d'Anjou, B. de Capiaumont, B. Bronze, (from Liseaux) B. Kenrick, B. Rance, B. Cutter, B. Bronze, (from Orleans) B. Incomparable, (?) B. d'Hiver, B. Thoinin, B. Bosc, B. Piqueury, B. Brown, B. Easter, Belle et Bonne, Belle Angevine, Bergamotte de Paques, B. Cadette, B. d'Automne, B. Suisse, Bezi Montigny, B. de la Motte, B. Vaet, Belmont, Bleecker's Meadow, Black Worcester, Bon Chretien Spanish, B. C. Winter, Belle Henriette, Buffam, Brougham, Charles X, Caillot Rosat, (from France) Chaumontelle Anglais, Cushing, Comtesse de Lunay, Columbia, Chaumontelle, Crassane, C. Winter, Catillac, Cuvellier, Comprette, Calebasse Bosc, d'Angleterre, Dunmore, Duchesse d'Angouleme, B. de Mars, Dix, Doyenne gris, D. gris d'Hiver Nouveau, Dumortier, D. Blanc, d'Éauf de Cygne, Epine Dumar, E. d'Hiver, Eyewood, Figue de Naples, Frederic of Wurtemberg, Fondante de Louvain, F. de Lisle, F. d'Automne, Flemish Beauty, Fulton, La Fortune, Figue d'Ete, Franc Real d'Hiver, Gilgoli, Gracioli, Golden Beurre de Bilboa, Glout Moreau, Green Sugar, Grosse Roman Carmelite, Hericart, Heathcote, Imperiale, Juliette, Jaminette, Louise Bonne, (of Jersey) Laisac, Long Green, Monarch, Marie Louise, Le Cure, Madotte d'Hiver, Messire

Jean, Milan blanc, March Bergamot, Ah! Mondieu, Miel de Waterloo, Martin Sec, Napoleon, Naigly, Nouvelle, Boussock, Naumkag, (?) Ne plus Meuris, No. 65 Van Mons, Passe Colmar, Parfium d'Hiver, Poire de Livre, P. de Suisse, P. de tomeau, P. de Glace, Pacquency, Petre, Rousselet de Rheims, R. Gross, Reine d'Hiver, Ridelie, Raymond, Ira, Tressor d'Amour, Urbaniste, Wilbur, St. Germain, Prince's St. Germain, Voix aux Pierres, Verte longue d'Automne, Verte longue panachee, Uvedale's St. Germain, and nine unnamed sorts; *Plums*; Corse's, (?) Imperatrice Violette; Early Crawford *Peaches*; and a large bunch of Syrian *Grapes*, weighing four pounds.

From R. MANNING, Pomological Gardens, Salem—*Pears*: Ronville, Figue Exira, Reine des Poires, Beurre de Capiaumont, B. Easter, B. d'Arenberg, B. Golden of Bilboa, B. d'Amalis, B. Rance, B. Beauchamps, B. Brown, B. Diel, B. Bosc, B. Preble, Huguenot, Winter Nelis, Comprette, King Edward's, Cushing, Dix, Comte de Lamy, Bleecker's Meadow, Pennsylvania, Dumortier, Fondante d'Automne, Hays, Steven's Genesee, French Autumn Bergamot, Turkish Bon Chretien, Croft Castle, Bezi Montigny, Andrews, Capshaft, Napoleon, Verte longue d'Automne, Passe Colmar, Marie Louise, Surpasse Virgouleuse, Jalousie, Hampden's Bergamot, Washington, Whitfield, Flemish Beauty, Endicott, Double Emploi, Columbe d'Hiver, Eyewood, Forme Urbaniste, Muscadine, Beauty of Winter, Jaminette d'Hiver, Lincoln, Doyenne Boussock Nouvelle, D. dore, D. d'Hiver, D. grs, D. blanc, Colmar Epine, Dingler, Plomgastet, Van Mons' Leon le Clerc, Cross, Pitt's Marie Louise, Quetelet, Las Canas, Pitfour, St. Ghislain, Paradis d'Automne, Wilkinson, Bezi de la Motte, Belle et Bonne, Glout Moreau, Urbaniste, Duchesse d'Angouleme, Petre, Harvard, Rousselet de Meester, Hericart, Augeries, Foster's St. Michael, Wilbur, Henry IV., Downton, Ne Plus Meuris, Surreine, Reines des Pays Bas, Catillac, Marie Louise Nova, Seckel, Styrian, Pound, Columbia, Princesse d'Orange, French Orange, Bergamotte de Parthenay, Sovereign du Princein, Heathcote, Rousselet de Rheims, Beaumont, Bergamot Neil, Van Assene, Dundas, Fulton, Sullivan, Figue de Naples, Girardin, Bon Chretien de Bruxelles, La Fortune, Jaminette Henkil, William's Bon Chretien, Le Cure, Seedling, Alpha, Bergamot Sylvaage, Chaumontelle, Hacois's incomparable, Alexander of Russia, Ambrosia, Boucqua, Cabot, Caen du France, Lewis, Epine d'Ete, Johonnot, Lammas, Striped Suisse Bergamot, Enfant Prodige, Great Citron Pear of Bohemia, Lederberne, Hathorne's Seedling, Fondante Van Mons, Thompson's Duchesse de Mars, Pope's Quaker, Juvardel, Rousselet St. Vincent, Long Green, Late Deschamps, Echasserie, St. Herblain d'Hiver, Trubschardy Dulle, Colmar d'Ete, Dunmore, Shakespeare, Schachling Vierry, Bishop's Thumb, Coter, John Dean, Bonne Louise, Leon le Clerc, Charles of Austria, Clara, Ramilies, Braude's St. Germain, Locke, Delices d'Hardenpont, Bon Chretien Fondante, St. Bruno, Buffam, and No 1036, 1454, 546, 858, 135, 1253, 969, 173, 1590, 1255, 1028, 1602 Van Mons—176 varieties.

Apples—Marquis, Minister, Fall Harvey, Smokehouse Hubbardson, Nonsuch, Granny Earl, Esopus Spitzenberg, Flag Boys, Swaar, Brabant Belflower, Rose of Sharon, King of the Pippins, Acton Pumpkin Sweet, Swan's Pine, Republican Pippin, Detroit, Tapley Greening, Ipswich Catshead, Pennock's Red Winter, Ribston Pippin, Green Sweet Pigeonette, Gravenstein, Morgan's Royal, Golden Ball, Porter, Pound, Sam Young, Black Apple, Conway, Rawles, Janet, Pelham Sweet, Baldwin, Ortleyp Pippin, Grey French Renette, Cambutheuthum, Danver's Winter Sweet, Gloucester, Triangle, River Apple, Acton Spice, Boxford, Jonathan, Edwards' Russet, Templeton Winter Sweet, White Apple, Garden Royal, Roman Stern, Rambour Franc, Murphy, Ramsell's Red Pumpkin Sweet, Endicott Pippin, Mank's Codlin, Rhode Island Greening, Louis XVIII, Wormsley Pippin, Greenpuns, Lyman's Summer Sweet Baldwin, Aldrich Russet, Cockle Pippin, Winter Pearmain, French Crab, Winter Sweet Paradise, Roxbury Russet, Renette de Caux, Salina, Large Burden, Beauty of Kent, Philadelphia Catshead, American Golden Pippin, Yorkshire Greening, Maiden's Blush, Jhoim, Sparhawk's President, Scarle's Pearmain, Coscor Cos Lovel Sweetest, Fall Pippin, Aunt Hannah, Vandevere, Fearn's, Pipp n. Boby Sweet, Red's Sweet, Finner's Red Striped, Golden Russet, White House Russet, Pownall Spitzenberg, Belle Lamont, Ananas, Russet Pearmain, Pumpkin Sweeting, Lucombe's Seedling, Mena-

gate, Kirk's Lord Nelson, Yellow Blower, Haskell Sweet, Pennsylvanian, Red of Earth's Fairness, Rancier, Priestly, Brandenburg's Spice Sweet, Rancier Monstrous, Winsap, Ipswich Seedling, and others.

Pears.—Green Gage, Rogers, Belle de Riom, Yellow Gage, Blue Imperatrice, Rose d'Automne Gage, Wilkinson, St. Catherine, Devonian Imperatrice—9 varieties.

Plums.—Violette Hative, Kendall's Heath, Clanton, Early Victorian, Red-globe, Late Admirable, Grosse Mignonne, Appicot, Old Mixon Freestone, Nivette, Van Zandt's Superb, Crawford's Early, Noblesse, Aston, Berger's Yellow, Yellow Rarierpe, Morris's White Rarierpe, Large Early York, Yellow Elberge, Jacques, Hastings, Yellow Admirable, Scott's Early Red Freestone, Flushing Rarierpe, Fuller's Gaiander, Lemon Cling, Barrington, Old Mixon Freestone, Cooleage's Favorite, English Swallow—30 varieties.

From S. WALKER—*Pears*: Andrews, Flemish Beauty, Catillac, William's Bon Chretien, Duchesse d'Angouleme, D. de Mars, Van Mons' Leon le Clerc, Caillot Rosat, Urbaniste, Seckel, Le Cure, Belle et Bonne, Epine Dumas, MacLaughlin, Doyenne dore, D. blanc, Williams's Early, Figue, Beurre Easter, B. d'Aremberg, B. Diel, B. Duval, B. de Capiaumont, B. Golden of Bilboa, B. Brown, Jargouille, Messire Jean, (?) Figue de Naples, Iron, Louise Bonne de Jersey, Johannot, Fondante Van Mons, F. d'Automne, St. Ghislain, Josephine, (?) Fourcroy, Glout Morecau, Compté de Lamy, Princesse d'Orange, Eyewood, Verte Longue d'Automne, Marie Louise, (?) Paquency, Passe Colmar and three unnamed sorts—45 varieties.

Apples.—Hawthorne and Gravenstein.

From S. PHIPPS, 16 varieties of *Pears*: Williams's Bon Chretien, Duchesse d'Angouleme, Seckel, Marie Louise, Gansell's Bergamot, Beurre Knox, B. Easter, Winter Nelis, Urbaniste, Heathote, Moorfool Egg, Columbia, Prince's St. Germain, Doyenne blanc, and Autumn Sugar pears.

From JOSIAH LOVITT, 2d, *Pears*: Williams's Bon Chretien, Beurre de Capiaumont, B. Bosc, B. d'Amalis, B. Diel, St. Ghislain, Harvard, Marie Louise nova, Hessel, Marie Louise, Andrews, Julienne, Figue de Naples, Belle et Bonne, Lewis, King Edwards, Surpasse Virgouleuse, Winter Orange, Louise Bonne de Jersey, Seckel, Petre, Wilkinson, and Stone (of Ohio); also, four varieties of *Plums*, several of *Peaches*, and six of *Apples*.

From F. W. MACONDRAY, *Pears*: Doyenne gris, Passe Colmar, Le Cure, Catillac, Reine des Pays Bas, Louise Bonne de Jersey, Epine d'Ete, Cushing, Calabasse Bosc, Duchesse d'Angouleme, Bon Chretien d'hiver, Beurre Easter, B. Noir-chair, B. Diel, Belle et Bonne, Napoleon, Winter Nelis, Andrews, Urbaniste, Washington, Long Green, Seedling, and three unknown kinds; also, eight varieties of *Apples*, three varieties of *Peaches*, and Brunswick (?) *Figs*.

From A. D. WILLIAMS & SON, *Pears*: Rousselot de Rheims, Verte Longue d'Automne, Doyenne blanc, Beurre brown, B. d'Amalis, B. Easter, Flemish Beauty, Autumn Bergamot, Louise Bonne de Jersey, Seckel, Messire Jean, Dix, Andrews, Harrison's Fall Baking, Williams's Bon Chretien, Williams's Early, Sylvange, Fondante d'Automne, Passe Colmar, Columbia, Epine d'Ete, Le Cure, Quince, and eighteen sorts unnamed; also thirty varieties of *Apples*, several of *Peaches* and *Grapes*.

From E. M. RICHARDS, *Pears*: Williams's Bon Chretien, and Beurre Bosc. *Apples*: Boxford, Sops of Wine and Lady Haly's Nonsuch.

From S. PHILBRICK, Brookline, Dix *Pears*.

From JOHN FISKE ALLEN, Salem, 90 varieties of *Grapes*, viz.: Isabella, Ferral, Cheralworth Tokay, Red Chasselas, Constantia, Wilmot's Black Hamburg, White Frontignac, Black Hamburg, Zinfandel, Whortley Hall Seedling, Tottenham Park Muscat, Chasselas de Fontambleau, Golden Chasselas, Lyzin, Esperione, Grizzly Frontignac, Muscat of Alexandria, and White Gascaque.

Twenty-two varieties of *Pears*, viz.: Summer Franc Real, Chaumontel, Marie Louise, Gansell's Bergamot, Seedling, Seckel, Munmore, Rouville, Cushing, Bezi de la Motte, Van Mons' Leon le Clerc, Lewis, Juliette, Easter Beurre, Glout Morecau, Roi de Wurtemberg, Verte longue, Verte longue d'Automne, Napoleon, Louise Bonne (of Jersey,) Fondante Van Mons, and Williams's Bon Chretien.

Four varieties of *Peaches*: Bellegrade, Lato Admirable, Norris's Red Rarierpe, and a Seedling.

From ABEL STEVENS, jr. Methuen. *Peaches*, several varieties.

From Dr. W. C. CHANDLER, South Natick, Early Crawford *Peaches*.

Seedling *Peaches*, by JOSEPH C. WEST.

St. Michael *Pears*, from the garden of NATHANIEL ARMOT.

Seedling *Apples*, from Wm. BRICOTT, Concord, N. H.

From Mrs. D. CUTHBERT, *Peaches*, seedlings, two varieties.

From JAMES EUSTIS, South Reading, Porter *Apples* and *Peaches*, Martin, seedlings.

Barlett *Pears*, from THOMAS SINCLAIR, Brighton.

From ISAAC EAY, Cambridge, *Peaches*, two varieties of seedling, Red and Yellow Rarierpe; also of *Plums*, two varieties, Diamond and Lombard.

From MAJOR SHEAFE, Rye, N. H., three varieties of *Apples*, for a name; and two varieties of seedling *Pears*.

From P. COOK, Roxbury, Black Hamburg *Grapes* (?)

From J. BRECK & Co., *Pears*: Beurre d'Amalis, B. Rance, Bergamotte de Pacques, Summer Bon Chretien, Messire Jean, Bergamotte Suisse, Duchesse d'Angouleme, Louise Bonne de Jersey, Doyenne blanc, St. Germain, Augeries, (?) and one variety, name unknown.

From A. J. DOWNING, Newburgh, N. Y., Doyenne blanc, Fulton, Bezi de la Motte, Beurre Diel, B. brown, B. de Capiaumont, and Urbaniste *Pears*.

Apples: Beauty of Kent, Dutch Mignonne, raised by W. H. Denning, Esq. of Presque Isle.

Fruit of the Osage Orange; ditto Paper Mulberry.

From JOHN ARNOLD, jr., Milton, five bunches Black Hamburg *Grapes*; one bunch weighed three pounds.

Two varieties seedling *Peaches*, from W. G. LEWIS, Roxbury.

From HOVEY & Co., *Pears*: Madotte, Van Mons' Leon le Clerc, (old,) Doyenne blanc, D. gris, Bergamotte de Parthenay, Jauoise de Fontenay Vendee, Limon, (of Louvain,) Muscat Lallemand, New Swan's Egg, Beurre Diel, B. Moire, Belle Henriette, Duchesse d'Angouleme, Figue de Naples, Epine de Toulouse, (?) Belle et Bonne de Hee, and Duquesne d'Ete (?)—also, Wilmot's Black Hamburg, Black Hamburg, Frankenthal, (?) White Frontignac, Grizzly Frontignac, Esperione, Alicant, (?) Chasselas de Fontambleau, Macready's Early White, Black Prince, Pitamston White Cluster, and St. Peter's *Grapes*—and the following *Peaches*: White Ball, and Cambridge Belle, (new seedlings,) George IV., Bellegrade, Old Mixon Free, Early Crawford, Cutter's Yellow, Early Robinson Crusoe, and four other sorts—and Cruger's Seedling and Semina *Plums*.

From Hon. B. V. FRENCH, the following kinds of *Apples*: Murphy, Fameuse, Blenheim, Pome d'Api, Hawthorneau, Gloria Mundi, Canada Reinette, Sweet Greening, Yellow Newton Pippin, Lyson, Danvers Winter Sweet, Red Winter, Large Striped Red, Beer, Holland Pippin, Porter, Pumpkin Sweet, and Nonsuch, with fifty-seven other sorts, not placed upon the tables—also, Beurre Bosc *Pears*, and Crawford's Early *Peaches*.

From MESSRS. WINSHIP, Delbecq, Belle de Bruxelles, Passans du Portugal, Beurre Easter, B. d'Aremberg, B. Golden of Bilboa, St. Ghislain, Seckel, Rousselot d'hiver, Glout Morecau, Fulton, Passe Colmar, Duchesse d'Angouleme, Andrews, Ambrette, La Fontaine, Gansell's Bergamot, Dearborn, (of Van Mons,) Rushmore's Bon Chretien, Bezi Vaet, Poire d'Amour, Frederic of Wurtemberg, Kenrick, (of V. Mons,) Williams's Bon Chretien, Winter Nelis, Fondante d'Automne, Muscadine, Moorfool Egg, and several sorts of *Pears* with doubtful names—also, Grand Sachem *Apples*, and six kinds of *Plums*.

From O. JOHNSON, Williams's Bon Chretien, Pound, Beurre d'Amalis, B. Easter, B. d'Aremberg, B. Diel, Poire's Russet Belle et Bonne, Princesse d'Orange, Henry IV., Epine d'Ete, Washington, Rousselot de Rheims, Buffam, Calabasse, Rousselot Panache, Urbaniste, Harvard, Cushing, Vallee Franche, Napoleon, Passe Colmar, St. Ghislain, Duchesse d'Angouleme, Hericart, Gilgil, Franc Real d'hiver, Jalousie, Louise Bonne de Jersey, Dix, Prince's St. Germain, Doyenne blanc, Le Cure, Verte Longue d'Automne, Blecker's Meadow, Julienne, Messire Jean, Winter Nelis, Johannot, Fondante d'Automne, and Ilacon's Incomparable pears; also, several varieties of *apples*, *peaches*, Black Hamburg *grapes*, and *melons*.

From J. M. IVES, Fulton, Williams's Bon Chretien, Dix, Bezi de la Motte, B. Montigny, Wilkinson, Fondante d'Automne, Long Green, Beurre Diel, B. Golden of Bilboa, B. Bosc, B. de Capiaumont, Napoleon, Andrews, Duchesse d'Angouleme, Lewis, Blecker's Meadow, Washington, Cushing, Passe Colmar, Cabot & Jalousie pears; also Reine Claude Violette and three other sorts of *plums*, eleven kinds of *apples*, and nine kinds of *peaches*.

From J. BRECK & Co., Beurre d'Amalis, B. Rance, Bergamotte de Paques, Summer Bon Chretien, Messire Jean, Ber

gamotte Suisse, Dutchess d'Angouleme, Louise Bonne de Jersey, Doyenne blanc, St. Germain, Augeries? and three other sorts with doubtful names.

From Rev. J. M. LORR, Boston, by E. N. GUTTERSON, Shelter Island, N. Y., one large Watermelon, weighing thirty pounds.

From F. HAGGERSTON, gardener to J. P. CUSHING, Black Hamburg, Poonah, Syrian, Muscat of Alexandria, White Nice, White Frontignan, Black Prince, White Portugal and other sorts; also splendid nectarines and eight or ten kinds of peaches.

From J. W. RUSSEL, gr. to HORACE GRAY, Esq., Muscat of Alexandria, White and Black Frontignan, Black Constantia, Black Prince, Black Hamburg, and Chasselas of Fontainebleau.

From W. QUANT, gardener to Hon. T. R. Perkins, Reigne de Nice, Black Raisin, Black Hamburg, White Frontignan, Muscat of Alexandria, Black Prince, Frankindale, and Syrian Grapes; also George IV., Bellegarde and Hill's Madeira peaches.

From T. NEEDHAM, gardener to O. H. Mather, Black Hamburg, Cannon Hall Muscat, Frankindale, Black Prolific, Black Lombardy (?) White Frontignan, White Portugal and Muscat of Alexandria Grapes; also a vine in fruit in a pot, and two kinds of pears.

From W. YOUNG, gardener to J. Arnold Esq., New Bedford, Syrian, Royal Muscadine, Victoria, (?) White Frontignan and Black Hamburg Grapes.

From S. & G. HYDE, Gravenstein, Porter, Hubbardston Nonsuch, Yellow Bellflower, Codlin, and Fall Sops of Wine apples; also, Ohio everbearing raspberries.

From S. A. WALKER, Seckel, William's Bon Chretien, Heathcote, Andrews, Golden Beurre of Bilboa, and Frederic of Wurtemberg pears; also two kinds of peaches.

From N. STETSON, Esq., Bridgewater, two kinds of peaches, fine.

From J. OWEN, four kinds of peaches, Beurre Diel pears, Green Gage plums, apples and grapes.

From J. S. CABOT, Winter Nelis, Beurre Easter, B. Brown, B. de Noireham, B. d'Aremberg, B. Diel, B. de Beaumont, B. Golden of Bilboa, B. de Capiaumont, Coffin's Virgouleuse, Reine des Pays Bas, Enfant Prodige, Capucin Van Mons, Louis of Bologna, Thompson's, Comte de Michaux, Catillac, Seckel, Surpasse Virgouleuse, Long Green of Europe, Columbia, Comte de Lamy, Croft Castle, Wilkinson, Fulton, Chapman's Early, (?) Burgomestre, Princesse d'Orange, Napoleon, Henry IV., Figue of Naples, Doyenne blanc, Muscadine, Alpha, Winter Orange, Green Pear of Yair, Frederic of Wurtemberg, Capheaf, Louise Bonne de Jersey, Bezi de la Motte, Autumn Bergamot, Williams's Bon Chretien, St. Ghislain, Bon Chretien d'Ete, B. Fondante, Urbaniste, Pennsylvania, Figue Extra, (Van Mons,) Washington, Hericart, Marie Louise nova, Chaumontelle, Jalousie, Hannas, La Fortune, Belle et Bonne, Plombgastel, Surpasse St. Germain, Andrews, Gendeshine, Flemish Beauty, Van Assene, Pitt's Prolific, Lewis, Braden's St. Germain, Citron of Bohemia, St. Andee Durdas Seedling No. 2, Boequia, Cabot's Seedling, Passans du Portugal, one variety, name unknown—74 sorts pears.

From JAS. L. F. WARREN, Pears, Andrews, Autumn Bergamot, Beurre d'Amilis, B. Golden of Bilboa, B. Easter, B. Diel, B. Gris, Burnett, Buffam, Bezi de la Motte, Bezi Montigny, Belle et Bonne, Bon Louis de Jersey, Bartlett, Catillac, Doyenne, Duchess d'Angouleme, Heathcote, Julienne, Jalousie, Iron, Master's Sec, Mons' Le Cure, Marie Louise, Madotte, Napoleon, Roulette de Rheims, Striped Spice, Swan's Egg, Seckel, Viète Longue d'Autonne, Wilhelmine, Wilkinson, Washington. Apples: 30 varieties, Baldwin, Blue Pearmain, Captain, Calville, Rouge, Danver's Winter Sweet, French Russett, Gloria Mundi, Golden Russett, Grand Lachine, Hubbardston Nonsuch, Hawthornden, Lyscom, Minister, Old Pearmain, Prince's Noble, Porter, Pigeonette, Roxbury Russett, Reinette Canada, Sweet Russett, Striped Spice, Yellow Bellflower, Red Gilliflower, Red Siberian Crab. Plums: Reine Claude, Violette, White Egg, Lombard and Semina, 5 varieties. Figs: Orange and Portugal, 2 varieties.

From GEO. NEWHALL, Dix, Williams's Bon Chretien, Catillac, Seckel, Fulton, Cumberland, Black Pear of Worcester, Frederic of Wertemberg, Louise Bonne de Jersey and Beurre Bose pears.

From E. WIGHT, Williams's Bon Chretien, Buffum, Winter Nelis, Napoleon, Gansell's Bergamot.

From J. W. SEVER, three sorts of peaches and one of plums.

From GEO. P. FOSTER, Plymouth, splendid Sieulle pears

From GEO. WALSH, seven kinds of pears, six of apples, five of peaches, white nectarines and grapes.

From W. H. HAYES, South Berwick, twelve large apples.

From C. NEWMAN, Reading, two sorts of seedling peaches.

From JOS. BALCH, Golden Beurre of Bilboa, Doyenne blanc, Brown Beurre and Williams's Bon Chretien pears.

From K. BAILEY, Sweet Water grapes, open culture.

From E. BARTLETT, Napoleon, Gansell's Bergamot, Frederic of Wurtemberg and Williams's Bon Chretien pears.

From P. P. SPAULDING, Lowell, Porter, and Chelmsford Seedling apples, and three kinds of peaches.

From B. HARRINGTON, Lexington, Porter apples, and Early Crawford and Crawford late peaches.

From S. W. HOLBROOK, Brighton, Blue pearmain.

From T. MASON, Black Hamburg and St. Peter's grapes, peaches and plums.

From E. TUFTS, Cambridge, an apple called Tuft's Baldwin, said to be a seedling, and four other kinds of apples.

From O. N. TOWNE, Black Hamburg and Sweet water grapes, Red Roman nectarines and peaches.

From S. R. JOHNSON, Urbaniste, Dix, Andrews, Beurre Diel, and Williams's Bon Chretien pears, and Sweet Water grapes.

From A. CLARK, South Framingham, Nonsuch (?) peaches.

From E. WHEELER, Framingham, Nonsuch (?) and very handsome Seedling Cling, peaches.

From G. MERRIAM, five kinds of peaches.

From E. VOSE, Esq., Hawthornden apples.

From H. DUTCH, Seedling peaches.

From JOS. RICHARDSON, Early Crawford peaches.

From the Endicott Family, Danvers, Endicott pears from the old tree planted in 1630.

REPORT OF FLOWERS EXHIBITED.

The annual exhibitions of the Massachusetts Horticultural Society have generally been noted for a grand display of Dahlias, as this is the season when they are generally in the greatest perfection. Amateurs had made large additions to their collections of this showy and sportive flower, and much was anticipated by growers and others in having an opportunity to compare flowers, and discuss the merits of the new varieties; but in this they were disappointed, for the failure was great, and, although there were some exceptions, the flowers in general were very imperfect, and the number unprecedentedly small. The extreme heat of the month, absence of rain, insects, and, to crown the whole, a high wind breaking and bruising the flowers the day previous to the exhibition, were the causes of this failure. The scarcity of the improved German aster, and some other autumnal flowers, may be attributed to the same cause. But, notwithstanding these prominent flowers did not appear on this occasion with their accustomed splendor and perfection, the floral ornaments and decorations more than made up the deficiency in the cut flowers; and, taken as a whole, Fruits, Flowers, Designs and Decorations combined,—no Exhibition ever was more attractive than the present one. There was an apparent improvement in the style and finish of the designs which ornamented the hall on this occasion, over those of the last year, and we can hardly do justice to the taste of those who executed them.

WM. QUANT, gardener to Hon. T. H. Perkins, exhibited a very beautiful and chaste Grecian Floral Temple, supported by eight pillars in correct architectural style, finished with moss and flowers. Much taste was displayed in arranging the color of the flowers which were finely blended, producing a pleasing effect. Four moss vases, containing plants of finely grown dwarf cockscombs, ornamented the corners of the temple. Mr. Quant also contributed twelve fine plants of dwarf cockscombs; a large plant, five feet high, of *Ardisia crenulata*, loaded with its scarlet berries; a large orange plant with fruit, Jerusalem cherry, and other pot plants. Also, four fine pyramidal bouquets for one of the Bradlee vases.

From J. L. L. F. WARREN: A Swiss Cottage. This was a beautiful design; had it been a little more elevated from the floor, it would have appeared to much greater advantage; as it was, it received much praise from the admiring spectators. This was finished with moss and flowers, and reflected much credit on the designer and maker, Mr. Cadmus, Mr. W.'s gardener. Mr. Warren also exhibited a very curious and unique pyramidal bouquet of vegetables, composed of ears of corn, cabbages, carrots, beets, asparagus, &c. producing a very pleasing effect, and worthy of a place in one of the new marble vases, which it occupied. Dahlias, some of them fine, and other cut flowers in variety. Also, a bouquet of French marigolds and evergreens, and others of different construction; one large py

pyramidal bouquet composed of Dahlias of every shade, very beautiful.

From WALKER & Co., a Chinese Pagoda. This was a very beautiful design, fringed principally with moss, and decorated with flowers. The China tea room, who stood in the centre of the structure, politely bowing his head to the crowd of spectators, attracted as much attention as the building itself. Four fine plants of Puschia, placed at the four corners of the design within the structure, added much to the beauty of the whole. The design and decorations were in perfectly good taste.

From R. WEST, by Mr. Sheehan: A Gothic Monument fourteen feet high. The architecture of this design was perfect; it made a fine appearance; was finished with moss, evergreen, and flowers. This, as well as the other designs, was much admired, and did credit to the author.

From THOMAS MOTLEY, Jr., by John Galvin: A Gothic Bower. This design was finished with moss and flowers; it was placed at the door to the private stairway, forming a fine Gothic arch.

From S. A. WALKER: One hundred feet of wreathing composed of cockscombs, amaranths, French marigolds, evergreen, and other permanent materials. It was tastefully suspended in the centre of the top of the hall between the chandeliers. Also, a beautiful flat fancy design of large dimensions, presenting a surface wrought with asters, amaranths, and other flowers, with the words "Horticultural Exhibition, 1846," inscribed in a border round it, wrought with immortal flowers: on the top of the design was an eagle composed of flowers: this was the best flat design in the room. Also, a beautiful pyramidal bouquet for one of the Bradley vases, cockscomb, dahlias, and other cut flowers.

From SAMUEL WALKER: A large flat bouquet for the walls.

From MISS R. BOWKER: A large pyramidal bouquet composed of over sixty varieties of native grasses and grains. Also, a circular wreath of great beauty of the same materials. These productions were arranged with much taste, and very much admired.

From JOHN D. WILLIAMS, by James McNeil, a large flat design representing a vase and bouquet wrought with asters, amaranths, marigolds, zinnias, dahlias, and other flowers of high colors, producing a brilliant effect.

From WM. KENRICK, an ancient Lyre, wrought with evergreen and immortal flowers,—a very beautiful design. Also, a fine Harp wrought with evergreens, (beautiful,) the same as exhibited last year.

From O. H. MATHER, by Thomas Needham: A vase covered with moss, ornamented with immortal flowers, in which was a handsome pyramidal bouquet,—very chaste and neat.

From MRS. E. A. STORY: A tall pyramidal bouquet, comprising a great variety of grasses gathered in Brighton. Also, a fanciful circular shield design, neatly arranged in figures, with amaranths and other immortal flowers.

From PARKER BARNES: A basket and arbor of flowers and evergreen, (very neat.)

From EDWARD ALLEN, Lowell: A large flat design composed of dahlias, asters, marigolds, &c., edged with evergreen.

From JAMES NUGENT: Two large shield-like designs or flat bouquets for the wall, composed of asters, dahlias, &c., edged with evergreen.

From J. L. GARDINER, by Daniel Crowley: Two fine shield-like designs of bouquets for the wall, wrought with dahlias and asters, finely intermingled with privet leaves, producing a fine effect. Also, pyramidal bouquet.

From ORR N. TOWNE: One circular shield-like design composed of dahlias, asters, &c., Also, two bouquets, dahlias and other cut flowers.

From MISS RUSSELL: A large flat bouquet for the wall, composed of fine flowers on an evergreen back. Also, a moss vase with "Flora's Gift" inscribed upon it, wrought with everlasting, filled with choice flowers.

From M. P. WILDER, President of the Society, a great variety of Dahlias, some of them fine.

From WINSHIP'S Nursery, Dahlias and cut flowers.

From J. FRECK & Co., Dahlias, Roses, and cut flowers.

From HOVEY & Co., Dahlias and asters; two flat bouquets; two mantle or table do.; two hand do.; and one fine large pyramidal bouquet for one of the marble vases.

From W. E. CARTER: Dahlias and cut flowers in great variety; also five bouquets.

From JOHN A. KENRICK: Two tall plants of Abutilon striata.

From THOMAS MASON: Dahlias, asters, and cut flowers in great variety.

From H. W. DUTTON: Dahlias and cut flowers in great variety.

From WM. MELLER: Dahlias and cut flowers in great variety.

From JOHN ARNOLD: A fine display of Roses.

From W. B. RICHARDS: Dahlias and cut flowers.

From JOHN PARKER: Dahlias, &c.

From JOHN HOVEY: Dahlias.

From EDWARD WINSLOW: Dahlias and asters.

From MADAME BUCKLOW of Medford: A magnificent specimen of Cactus triangularis.

REPORT OF VEGETABLES EXHIBITED.

We regret to say that the exhibition of vegetables was rather a meagre one, notwithstanding the important place which their cultivation holds in horticulture. The specimens which were exhibited, however, were almost universally excellent of their kind. They were as follows:

From F. W. MACDONALD, Dorchester, egg plants, carrots, blood beets, celery, parsnips, field corn, and six varieties of tomatoes.

From A. D. WILLIAMS, Roxbury, Canada squash, Marrow do., long blood beets, turnip do., sweet corn, carrots, brocoli, Savoy cabbage, drumhead do., red do., celery, tomatoes.

From EBEN WIGHT, Dedham, four squashes from one vine, weighing respectively 87, 79, 78, and 68 pounds.

From THOMAS MOTLEY, Jr., Dedham, egg plants, Lima beans.

From ENOCH BARTLETT, Roxbury, club gourd.

From ORR N. TOWNE, Somerville, egg plants, two varieties.

From J. FISK ALLEN, Salem, tomatoes.

From N. STETSON, Bridgewater, tomatoes.

From EDWARD ALLEN, Lowell, celery.

From SAMUEL WALKER, Roxbury, tomatoes, two varieties.

From P. COOK, Roxbury, tomatoes.

From J. L. L. F. WARREN, Brighton, squashes of the growth of 1845, wreath of corn, 12 varieties, Egyptian wheat and millet.

From WM. QUANT, Brookline, egg plants.

It may here be remarked that at no former exhibition has it closed when the fruits, flowers, and floral decorations were left in so fine a condition. The Committee would again congratulate the Society on the successful result of the exhibition, which it is hoped will act as an incentive to future efforts in a cause which is doing so much for our common country.

For the Committee,

HENRY W. DUTTON, *Chairman*.

WEEKLY EXHIBITIONS.

At the Weekly Exhibition of the Society on the 26th Sept., the Committee on Flowers awarded prizes as follows:

To Miss Russell the first premium of \$2, for the best Bouquet, and to R. West, by J. Sheehan, the second premium of \$1.

DAHLIAS. The Committee award to M. P. Wilder a gratuity of \$5, for a rich display of choice Dahlias.

Division B. Judges—David Haggerston, P. B. Hovey, and Wm. Meller, who were of opinion that on account of the imperfection of many of the flowers, that none of the exhibitors in Class No. 1, were entitled to a premium. In Class No. 2, they award to J. L. L. F. Warren the first premium of \$5, for the following twelve blooms: Silvio, (new) Cleopatra, (new) Harlequin, (new) Great Mogul, Paul Pry, Hero of Stonehenge, Unique, (Ansell's) Oddity, (new) Viscount Ressegneur, (new) Preceptor, Latour d'Auvergne, Cheltenham Queen.

To Hovey & Co the second premium of \$3, for the following: Orlando, Standard of Perfection, Viscount Ressegneur, Nutwick, Queen of Roses, Miranda, Striata formosissima, Constantia, Nonpareil, Cinderella, Antler, Arethusa.

The judges also were of opinion that Hovey & Co., and J. L. L. F. Warren exhibited flowers worthy of premium, in Class No. 3—but as it is not considered in accordance with the design of the Society to award two premiums in the same division, they are necessarily withheld.

Hovey & Co's flowers were as follows: Orlando, Viscount Ressegneur, Primrose, Standard of Perfection, Lady Howland, Victory of Sussex.

J. L. L. F. Warren's best six were: Antagonist, Competitor, Viscount Ressegneur, (new) Harlequin, (new) Ultimatum, (new) Ansell's Unique.

Division A and C. Parker Barnes, Edward Allen and Azell Bowditch, Judges.

Division A. To Wm. Quant a premium of \$8, for the best 12 dissimilar blooms; the Premier prize—no competitor—names not given.

To James Nugent, a premium of \$4, for the best flower. Specimen bloom

To Wm. Quant, \$1 each for the following single blooms: Antagonist, white; Queen, rose; Mrs. Shelby, purple; Essex Trumpet, very dark; Cleopatra, yellow; Madam Chauvier, tipped Total \$6. To Wm. Meller, \$1 each for Pet Rival, maroon, and Nonpareil, scarlet.

Division C. Class I. Flowers considered unworthy of a premium.

Class II. First premium of \$5, to Wm. Quant, for the best 12 dissimilar blooms—names not given.

Second premium of \$3, to Wm. Meller, names as follows: Antagonist, Marchioness of Ormond, Keyne's Duke of York, Cleopatra, Primrose, Pickwick, Beauty of Birmingham, Beauty of Sussex, Lady Harland, Essex Bride, Miss Watson, Ansell's Unique.

Class III. First premium of \$3, for the best six dissimilar blooms to Nahum Stetson by Henry Reed—no other Dahlias offered in this class worthy of premium.

JOSEPH BRECK, Chairman.

ANNUAL MEETING OF THE SOCIETY.

Saturday, Oct. 3d, 1846.—President WILDER occupied the Chair. The Recording Secretary placed on the table five newspapers (as vouchers) containing the advertisement of a notice for the election of officers, &c. for the ensuing year. The Chairman of the Committee on nomination reported a printed list, and the copies were distributed among the members present.

The Chairman stated that the Recording Secretary, the Chairman of the Finance Committee, and Mr. Richards, one of the same committee, declined a nomination.

On opening the polls, it was voted that the polls remain open for 30 minutes.

Messrs. Walker and Batchelder were chosen a committee to sort and count the votes. The committee reported the persons names in the printed list, were chosen officers of the Society for 1847, viz:

MARSHALL P. WILDER, *President.*

Vice Presidents.

B. V. FRENCH. CHEEVER NEWHALL,
JONATHAN WINSHIP. E. M. RICHARDS.

SAMUEL WALKER, *Treasurer.*

J. E. TESCHEMACHER, *Corresponding Secretary.*

E. C. R. WALKER, *Recording Secretary.*

JOHN LEWIS RUSSELL, A. M., *Professor of Botany and Vegetable Physiology.*

T. W. HARRIS, M. D., *Professor of Entomology.*

S. L. DANA, M. D., *Professor of Horticultural Chemistry.*

Committee on Fruits.—Samuel Walker, Chairman; P. B. Hovey, Jr., Otis Johnson, Josiah Lovett, David Haggerston, J. F. Allen, Eben. Wight.

Committee on Plants and Flowers.—Joseph Breck, Chairman; H. W. Dutton, W. E. Carter, Parker Barnes, Alex. McLellan, E. A. Story, William Quant.

Committee on Vegetables.—A. D. Williams, Jr., Chairman; W. B. Kingsbury, A. D. Williams, Josiah Newhall, James Nugent, Azell Bowditch, E. C. R. Walker.

Committee on Library.—C. M. Hovey, Chairman; C. K. Dillaway, R. M. Copeland, Joseph Breck, W. B. Richards.

Committee on Synonyms of Fruit.—M. P. Wilder, Chairman; B. V. French, C. M. Hovey, J. S. Cabot, the Chairman of the Fruit Committee.

Executive Committee.—The President, Chairman; the Treasurer, A. Aspinwall, E. M. Richards, Otis Johnson.

Committee for establishing Premiums.—The Chairman of Committee on Fruits, Ch'n do. Flowers, do. Vegetables, C. M. Hovey, David Haggerston.

Finance Committee.—Josiah Stickney, Chairman; Joseph Balch, F. W. Macondray.

Committee of Publication.—J. E. Teschemacher, Chairman; C. K. Dillaway, Eben. Wight, Recording Secretary, Chairman of the Committee on Fruits, do. Flowers, do. Vegetables.

Members elected—James Kelt, Jr. and S. W. Cole, of Boston; Alfred A. Andrews and Samuel Payson, of Roxbury.

Adjourned to the first Saturday in November, next.

EBEN. WIGHT, *Rec Sec'y.*

NEW-YORK STATE AGRICULTURAL SOCIETY.

Report of the Committee on Flowers, at the Fair of the New-York State Agricultural Society, held at Auburn on the 15th, 16th and 17th of September, 1846.

The Committee, chosen by the Society to award premiums on flowers, respectfully report:—

That they have attended to the duties assigned to them, and have given to the subject all the attention in their power.

The Committee take pleasure in congratulating the Society on the increased interest which the Annual Fairs are exciting in the minds of professional and amateur florists, evinced by the greatly augmented display of choice flowers from remote parts of the State at this over all previous exhibitions.

There were exhibited by Elihu Tyler of Buffalo: Triumph de Luxemburg, Hymenal Tea, Jaune Despres, La Marque, Sanguinea, Amelia, Hamiltonii, Cramoisi Superior, Archinto, and other roses; eight varieties of Verbenas, and other choice flowers, all beautifully arranged in a basket.

By Professor Cockpock: A floral design composed of choice dahlias, German asters, and red and white globe amaranths, arranged on a ground of green moss, and representing a spread eagle with the name of the "Buffalo Horticultural Society," in its beak, all beautifully arranged by the pupils of his Musical Academy at Buffalo.

By Col. Hodges, of Buffalo: Nineteen varieties of roses, viz. Arch Duke Charles, Odorata, Sanguinea, Indica, Triumph de Luxemburg, White China, Bell Gravesii, La Marque, Pink Cluster, Desir de L'Amateur, Marquess Bocalla, Dutchess of Kent, Agripina, General Merlin, Madam Despres, Miss Lawrence, Aimee Vibert, Evandvier; fifteen different varieties of Verbenas, several varieties of Dahlias and Phlox Drummondii.

By Wm. Webb, of Buffalo: Sixteen varieties of Tea, Noisette and Bourbon roses; twelve varieties of Verbenas, a few very fine German Asters, Passiflora alata, and two very large Cockscobs growing in pots, one of them measuring 20 inches over the crest of the flower.

By L. Menard, of Albany: Two very beautiful bouquets arranged with exquisite taste and skill, and composed of 31 varieties of choice flowers, viz: Erica bland, Erica cafra, Erica cerinthoides, Erica gracilis, Erica borriene, Erica transparent, Fuschia venus victrix, Fuschia exoniensis, Fuschia chauverii, Fuschia rosea alba, Hoya carnos, Rendoleta speciosa, Oreschynanthus grandiflorus, Phlox paniculata, Phlox amosnoeifera, Diasmia erioides, Heliotropam peruvianum, Delphinium azureum, Arbutum striatum, Carnation Pinks, Schyzanthus alba; Verbenas, Polki, Eclipse and Majestica; Roses—Aimee Vibert, Souvenir de Malmaison, Marshal de Villars, Arch Duke Charles, Queen of the Bourbons, Princess of Nassau, and Asclepias courasavide.

By Dr. Alexander Thompson, of Aurora, Cayuga county: Several varieties of fine German Asters, Zinnias of sorts; several fine varieties of Phlox Drummondii, a choice collection of Dahlias and many beautiful Verbenas not named.

By Samuel S. Graves, of Auburn: Dahlias, Phloxes, Zinnias, Petunias, Heliacanthus, Asters, Pansys, and many others.

By Henry Morgan, Esq., of Aurora: Eight varieties of Dahlias, seven beautiful varieties of German Asters, Double German Ten Week Stocks, Double Sweet Williams, Petunias, Globe Amaranths, Zinnias, Honeysuckles, and Champney roses, all tastefully arranged in four floral ornaments.

By Professor Isaac W. Jackson, of Schenectady: Seventy-seven different varieties of flowers, beautifully arranged in fifteen floral ornaments for vases, composed of, among others, twenty different varieties of Dahlias of the finest kinds, twenty beautiful varieties of German Quilled Asters, several fine Verbenas, including Feast's new White Eclipse, Roseum superbum, &c. &c., Fuschias. Roses, Zinnias, Petunias, Globe Amaranths, several new Phloxes, and many others.

By Mrs. E. T. Thompson Martin, of Willow Brook, Owasco Lake, Cayuga county: A very beautifully arranged floral ornament, composed of different varieties of choice flowers, and also four beautiful bouquets.

By HEN. J. PIERCE, of Auburn: A fine collection of cut flowers.

By MR. H. TAYLOR, of Auburn: Dahlias, Verbenas, Phloxes, and many other flowers in great profusion.

By MRS. P. B. EASON, of Auburn: Several varieties of Tea roses, Geraniums, Verbenas, &c.

By J. J. SEYMOUR, of Auburn: A fine display of cut flowers and a very large *Volcanaria* in a tub, in very fine condition and in full bloom.

By Mrs. Leland, of Auburn: A handsome floral ornament.

By Mrs. WATKINS, of Auburn: A large number of choice cut flowers, and two very fine Oleander trees, 6 and 10 feet high, in full bloom.

By Mrs. CHEDDLE, of Auburn: A large number of fine Dahlias and other flowers.

By Miss Jane HOLLEY, of Auburn: A fine *Bignonia grandiflora*.

By Miss H. C. MORSE, of Skeneateles: Several very fine Cacti, Geraniums and other green-house plants in pots.

By Mrs. M. MILLER, of Auburn: Several very large and beautiful green-house plants in tubs and pots; among the number, an Orange tree six feet high laden with fruit, a Shaddock tree in fruit, a very fine *Ficus elastica* ten feet high, a Lemon tree laden with fruit, a large and very fine *Cactus flagelliformis*, a very large and splendid *Arum esculentum* and many others.

By Messrs. ELWANGER and BARRY, of the Mount Hope Nurseries at Rochester: Twenty-nine varieties of roses, viz. of Hybrid Perpetuals, Augustine Mouchelet, Marquis Boccella, Dutchess de Nemours; of Noisettes, Smithii and Monstrosa; of Teas, Victoire Modeste, Triomphe de Luxembourg, Strombio, Souvenir de la Malmaison, La Sylphide, Gen. Toyer, Bougere, Delphina, Grandis, Princess Marie; of Bourbons, Henri Planter, Genl. Dubourg, Princess Clementine, Hermosa; of Bengals, Louis Philippe, Laurencia, Agrippina, Dutchess of Kent, Beau Carmoline, Diantherosa, Grandval, Vanilla scented, White China and Madama. Twenty-six varieties of Dahlias, viz. La Tour D'Auvergne, Rienzi, Viscountess of Beresford, Marshal Sault, Hector, Horace Binney, Mrs. Rushton, Rouge et Noir, Topaz, King of Lilacs, Lady Bathurst, Lord Howden, Girling's Prince of Wales, Glory of Altenburg, Simon Snyder, Henry Clay, Washington Irving, Murillo, Col. Mansfield, Conservative, Ansell's Unique, Widnall's Queen, Standard of Perfection, Golden Sovereign, and Girling's Perfection.—Twelve varieties of Verbenas, viz. Pepperii, Bicolor Grandiflora, Fulgens, Rosea elegans, Candidissima, Sanguinea, Brillii, President, and four of E. & W.'s own seedlings, all very good, Barryi, Odorata, Rochester and Genesee; also, two floral ornaments beautifully arranged with choice flowers, such as Roses, Fuschias, Verbenas, Geraniums, Heliotropes, Dahlias, Asters, Zinnias, &c. &c.

By James Wilson, Nurseryman of Albany: One hundred and thirty-two varieties of flowers, including among the number twenty-six varieties of new and rare Dahlias: as Emperor of China, Hero of the West, Sir E. Antrobus, Eva, Constantia, Oakley's Surprise, Lady St. Maur, Oddity, Minerva, Striata, Formosissimum, Bragg's Antagonist, Mrs. Rushton, Mackenzie's Perfection, Argo, Prince of Wales, King of Lilacs, Purity, Lady Sale, Illuminator, Viscount Repeigneur, Dupetit Thouars, Great Western, Andrew Hofer, Tippecanoe, La Tour, D'Auvergne, Marchioness of Ormond. Twenty beautifully quilled German Asters. Fourteen of the finest and newest Verbenas, such as Majestica, Bridesmaid, Feast's new White, Eclipse, Polkii, Brill's Roseum Bicolor, Faust's new Blue, Fulgens, Roseum superbum, &c. &c. Seven varieties of new Phloxes, viz. Princess Marianne, Harrisonii, Paniculata latifolia, Freilinghuysen; a new dark striped *Paniculata*, var. New Purple, and *Acuminata alba*; also, Cape Jasmines or Gardenias, Heliotropes, Ericas, several very beautiful Fuschias, &c. &c. &c., together with thirty-two different varieties of Hyb. Perpetual, Isle de Bourbon, Noisette, Tea and China roses, as Auberson, Paul Joseph, Madam Despres, Hermosa, Triomphe de Luxembourg, Queen Victoria, Julie de Lyons, Champneyana, Dr. Marx, Robespierre, Rivier's Perpetual, Dutchess of Mecklenburgh, Dr. Roques, Agrippina, Augustine Mouchelet, Fairy Rose, Ophi chromatella or Cloth of Gold, Smithii, Duc d'Aumale, Sylph, Sanguinea, Multiflora, Nimon de l'Enclos, Yellow Tea, Bon Seline, Bougere, Le Paecliolis, Mazeppa and Madam Nesard. An exquisitely arranged bouquet composed of thirty-six different varieties of choice and rare flowers, and also a beautifully arranged floral design composed of more than one hundred rare Dahlias, choice roses, Gladioluses, German Asters, Amaranthus, Geraniums, Heliotropes, &c. &c.

By Edward Thomas, of Geneva: Three new seedling Dahlias: 1. Mrs. Hemans, a double, having a large number of well formed, full centre, petals finely cupped, about the size of *Strata*, every fine flower. 2. Thomas' Perfection, a variety of globular form, petals finely cupped, about the size of the last—"a good flower." 3. New Globe Crimson, a small flower of globular form, with petals finely quilled, but not equal to No. 2. Also, about seventy varieties of cut flowers, including among them about a dozen varieties of Tea and China roses, six varieties of German Asters, six varieties of Verbenas, Carnations, Cactus Jenkensoni, Phlox Drummondii, Double China Pinks, and forty-four varieties of choice Dahlias, including among the number, Charles the 12th, Stratem Formosissimum, Surpassa Royal, Incomparable, Sunbury Hero, Inwood's Earl, Seman's Clara, Red Rover, Queen Victoria, Conqueror of Europe, King of the Yellows, &c. &c.

Mr. Thomas was unfortunately detained by the non-arrival of the Western cars, until after the premiums were awarded on articles exhibited for competition.

The committee have awarded the premiums as follows:

For the greatest variety and quantity of flowers exhibited:

1st premium to James Wilson, of Albany, a silver medal.

2nd premium to Isaac W. Jackson of Schenectady, a diploma.

3d premium to Elwanger and Barry of Rochester, a volume of Transactions.

For seedling Dahlias there appeared but one competitor, Edward Thomas of Geneva; his Dahlias being of great merit and beauty, the Committee have awarded the first premium to his seedling, Mrs. Hemans, (particularly noticed above,) a diploma; and the second premium to his Thomas' Perfection, a diploma.

For the best floral ornament: to James Wilson of Albany, a silver medal.

For the best twenty-five varieties of Dahlias:

First premium to James Wilson of Albany, a silver medal.

Second premium to Elwanger and Barry of Rochester, a diploma.

Third premium to J. W. Jackson of Schenectady, a volume of Transactions.

For the most beautiful bouquet:

First premium to James Wilson of Albany, Colman's Tour.

Second premium to L. Menard of Albany, a diploma.

Third premium to L. Menard of Albany, volume of Transactions.

For the greatest variety of green-house plants, owned by one individual:

First premium to Mrs. M. Miller of Auburn, a diploma.

Second premium to Miss H. C. Morse of Skeneateles, volume of Transactions.

For the best twenty German Asters:

To Professor Isaac W. Jackson of Schenectady, a volume of Transactions.

For the best twelve varieties of Roses:

First premium to James Wilson of Albany, a diploma.

Second premium to Elwanger and Barry of Rochester, volume of Transactions.

The Committee have awarded the following discretionary premiums:

To Mrs. E. T. Throop Martin of Willow Brook, Owasco Lake, for a beautiful floral ornament composed of choice and rare flowers and exquisitely arranged by herself, a diploma.

To Elihu Tyler of Buffalo, for a beautifully arranged basket of choice flowers, a diploma.

To Elwanger and Barry of Rochester, for a tastefully arranged floral ornament composed of green-house flowers, a diploma.

To Professor Coppock of Buffalo, for an elaborately wrought floral design, arranged with great skill and good taste, a diploma.

To Wm. Webb of Buffalo, for a fine display of choice roses, Verbenas and other flowers, a diploma.

To Col. Hodges of Buffalo, for a choice collection of rare and beautiful roses, Verbenas and other flowers, a diploma.

To Henry Morgan, Esq. of Aurora, for a beautiful floral design composed of choice flowers and arranged with good taste, a diploma.

All of which is respectfully submitted.

HERMAN WENDELL, M. D., of Albany.

WILLIAM R. RANDALL, of Cortland.

JAMES TRACY, of Syracuse.

Committee.



FIG. 63. ORNAMENTAL ICE HOUSE ABOVE GROUND.

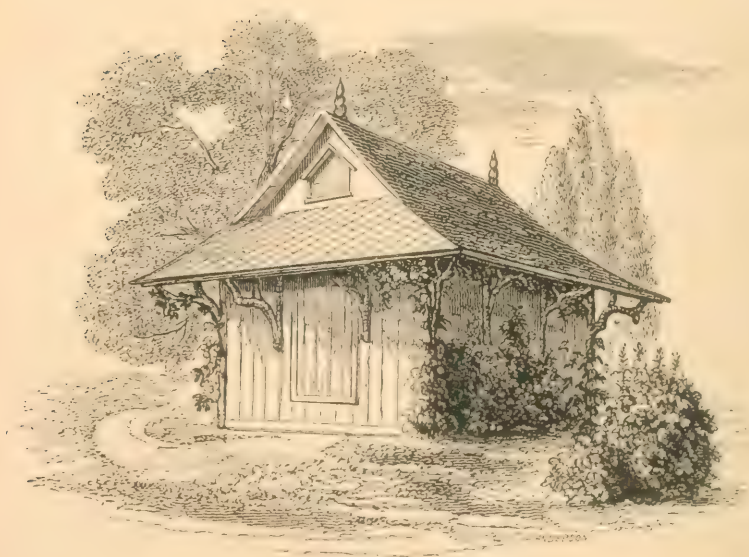


FIG. 64. ORNAMENTAL ICE HOUSE ABOVE GROUND.

THE



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No. 6.

THE ICE HOUSE and the HOT HOUSE, types of Lapland and the Tropics, are two contrivances which civilization has invented for the comfort or luxury of man. A native of the Sandwich islands, who lives, as he conceives, in the most delicious climate in the world, and sleeps away the best part of his life in that happy state which the pleasure-loving Italians call "*dolce far niente*," (sweet do nothing)—smiles and shudders when he hears of a region where his familiar trees must be kept in glass houses, and the water turns, now and then, into solid cold crystal!

Yet, if happiness, as some philosophers have affirmed, consists in a *variety* of sensations, we denizens of temperate latitudes have greatly the advantage of him. What surprise and pleasure awaits the Sandwich islander, for example, like that we experience on entering a spacious hot-house, redolent of blossoms and of perfume, in mid-winter, or on refreshing our exhausted frames with one of "Thomson and Weller's" vanilla creams, or that agreeable compound of the vintage of Xeres, pounded ice, etc., that bears the humble name of "sherry cobbler;" but which having been introduced lately from this country into London, along with our "American ice," has sent into positive ex-

tacies all those of the great metropolis, who depend upon their *throats* for sensations.

Our business at the present moment is with the *Ice-house*,—as a necessary and most useful appendage to a country residence. Abroad, both the ice-house and the hot-house are portions of the wealthy man's establishment solely. But in this country, the ice-house forms part of the comforts of every substantial farmer. It is not for the sake of ice-creams and cooling liquors, that it has its great value in his eyes, but as a means of preserving and keeping in the finest condition, during the summer, his meat, his butter, his delicate fruit, and in short his whole perishable stock of provisions. Half a dozen correspondents, lately, have asked us for some advice on the construction of an ice-house, and we now cheerfully offer all the information in our possession.

To build an ice-house in *sandy or gravelly soils*, is one of the easiest things in the world. The drainage there is perfect, the dry and porous soil is of itself a sufficiently good *non-conductor*. All that it is necessary to do, is to dig a pit, twelve feet square, and as many deep, line it with logs or joists faced with boards, cover it with a sim-



Fig. 65. The common ice-house below ground.

ple roof on a level with the ground, and fill it with ice. Such ice-houses, built with trifling cost, and entirely answering the purpose of affording ample supply for a large family, are common in various parts of the country.

But it often happens that one's residence is upon a strong loamy or clayey soil, based upon clay or slate, or, at least, rocky in its substratum. Such a soil is retentive of moisture, and even though it be well drained, the common ice-house just described will not preserve ice half through the summer in a locality of that kind. The clayey or rocky soil is always damp—it is always an excellent conductor, and the ice melts in it in spite of all the usual precautions.

Something more than the common ice-house is therefore needed in all such soils. "How shall it be built?" is the question which has been frequently put to us lately.

To enable us to answer this question in the most satisfactory manner, we addressed ourselves to Mr. N. J. WYETH of Cambridge, Mass., whose practical information on this subject is probably fuller and more complete than that of any other person in the country, he, for many years, having had the construction and management of the

enormous commercial ice-houses near Boston—the largest and most perfect known.*

We desired Mr. WYETH's hints for building an ice-house for family use, both above ground, and below ground.

In the beginning, we should remark that the great ice houses of our ice companies are usually built above ground; and Mr. WYETH in his letter to us remarks, "*we now never build or use an ice-house under ground; it never preserves ice as well as those built above ground, and costs much more.* I, however, send you directions for the construction of both kinds, with slight sketches in explanation." The following are Mr. WYETH's directions for building:

"1st. *An Ice-house above ground.* An ice-house above ground should be built upon

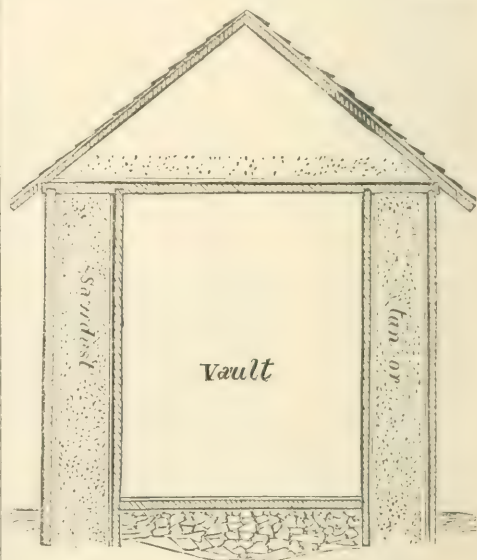


Fig. 66. Section of the Ice-house above ground.

the plan of having a double partition, with the hollow space between filled with some non-conducting substance.

* Few of our readers are aware of the magnitude which the business of supplying foreign countries with ice has attained in New-England. Millions of dollars worth have been

"In the first place, the frame of the sides should be formed of two ranges of upright *joists*, 6 by 4 inches; the lower ends of the joists should be put into the ground *without any sill*, which is apt to let air pass through. These two ranges of joists should be about two feet and one-half apart at the bottom, and two feet at the top. At the top these joists should be morticed into the cross-beams, which are to support the upper floor. The joists in the two ranges should be placed each opposite another. They should then be lined or faced on one side, with rough boarding, which need not be very tight. This boarding should be nailed to those edges of the joists nearest each other, so that one range of joists shall be outside the building, and the other inside the ice-room or vault. (Fig. 67.)

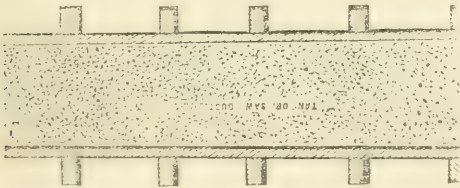


Fig. 67. Manner of nailing the boards to the joists.

"The space between these boardings or partitions should be filled with wet tan, or sawdust, whichever is cheapest or most easily obtained. The reason for using *wet* material for filling this space is, that during winter it freezes, and until it is again thawed, little or no ice will melt at the sides of the vault.

shipped from the port of Boston alone, within the last eight years; and the East and West Indies, China, England and the South, are constantly supplied with ice from that neighborhood. *Wendham Lake* is now as well known in London for its ice, as *Westphalia* for its hams. This enterprise owes its success mainly to the energy of *FREDERICK TUDOR, Esq.* of Boston. The ice-houses of this gentleman, built, we believe, chiefly by *Mr. WYETH*, are on a more gigantic scale than any others in the world. An extra whole year's supply is laid up in advance, to guard against the accident of a mild winter, and a railroad several miles in length, built expressly for the purpose, conveys the ice to the ships lying in the harbor.

"The bottom of the ice vault should be filled about a foot deep with small blocks of wood; these are levelled and covered with wood shavings, over which a strong plank floor should be laid to receive the ice.

"Upon the beams above the vault, a pretty tight floor should also be laid, and this floor should be covered several inches deep with dry tan or sawdust. The roof of the ice-house should have considerable pitch, and the space between the upper floor and the roof should be ventilated by a lattice window at each gable end, or something equivalent, to pass out the warm air which will accumulate beneath the roof. A door must be provided in the side of the vault to fill and discharge it; but it should always be closed up higher than the ice, and when not in use should be kept closed altogether.

"2d. *An Ice-house below ground.* This is only thoroughly made by building up the sides of the pit with a good brick or stone wall, laid in mortar. Inside of this wall set joists, and build a light wooden partition against which to place the ice. A good floor should be laid over the vault as just described, and this should also be covered with dry tan or sawdust. In this floor the door must be cut to give access to the ice.

"As regards the bottom of the vault, the floor, the lattice windows in the gables for ventilation, etc., the same remarks will apply that have just been given for the ice-house above ground, with the addition that in one of the *gables*, in this case, must be the door for filling the house with ice.

"If the ground where ice-houses of either kind are built, is not porous enough to let the melted ice drain away, then there should be a waste pipe to carry it off, which should be slightly bent, so as always to retain enough water in it to prevent the passage of air upwards into the ice-house."

These plain and concise hints by Mr. WYETH, will enable our readers, who have failed in building ice-houses in the common way, to remedy their defects, or to construct new ones on the improved plan just given. The main points, it will be seen, are, to place a sufficient non-conducting medium of tan or saw-dust, if above ground, or of wall and wood partition, if below ground, to prevent the action of the air, or the damp soil, on the body of ice enclosed in the vault.

Mr. WYETH has not told us how large the dimensions of an ice-house built in either of these modes should be to provide for the use of an ordinary family through a season ; but we will add as to this point, that a cube of twelve to fourteen feet—that is, a house, the vault of which will measure about twelve to fourteen feet “in the clear,” every way, will be quite large enough, if properly constructed. An ice-house, the vault of which is a cube of twelve feet, will hold about fifty tons of ice. One of this size, near Boston, filled last January, is still half full of ice, after supplying the wants of a family all the season.

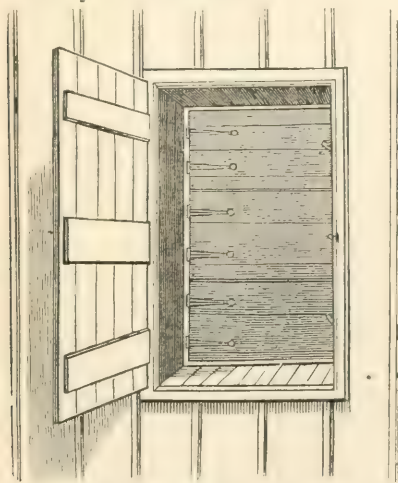


Fig. 68. Double Door of the Ice-house.

In the ice-house above ground, the opening being in the side, it will be best to have a double door, one in each partition, opposite each other. The outer one may be entire, but the inner one should be in two or three parts. The upper part may be opened first, so that only so much of the ice may be exposed at once, as is necessary to reach the topmost layers.

An ice-house below ground is so inconspicuous an object, that it is easily kept out of sight, and little or no regard may be paid to its exterior appearance. On the contrary, an ice-house above ground is a building of sufficient size to attract the eye, and in many country residences, therefore, it will be desirable to give its exterior a neat or tasteful air.

A simple and pleasing mode of doing this, and one which probably will prove quite satisfactory in most farms and country seats, will be to side or weather-board the exterior joists, (left by Mr. WYETH,) and build the roof, after the mode shown in the *frontispiece* of the September number of this journal, and explained on page 109.

It will frequently be found, however, that an ice-house above ground may be very conveniently constructed under the same roof as the wood-house, tool-house, or some other necessary out-building, following all the necessary details just laid down, and continuing one roof and the same kind of exterior over the whole building.

In places of a more ornamental character, where it is desirable to place the elevated ice-house at no great distance from the dwelling, it should, of course, take something of an ornamental or picturesque character.

In figures 63 and 64, (see *FRONTISPIECE*,) are shown two designs for ice-houses above ground, in picturesque styles. Figure 63

is built in a circular form, and the roof neatly thatched. The outside of this ice-house is roughly weather-boarded, and then ornamented with rustic work, or covered with strips of bark neatly nailed on in pannels or devices. Two small gables with blinds ventilate the space under the roof.

Fig. 64 is a square ice-house, with a roof

projecting three or four feet, and covered with shingles, the lower ends of which are cut so as to form diamond pattern when laid on the roof. The rustic brackets which support this roof, and the rustic columns of the other design, will be rendered more durable by stripping the bark off, and thoroughly painting them some neutral or wood tint.*

REMARKS ON THE PEAR BLIGHT OF THE WEST.

BY S. B. G., TERRE HAUTE, INDIANA.

DEAR SIR—From the first announcement of the Horticulturist which met my eye, I looked forward to the forthcoming publication with great interest. Upon one subject in particular, that of the pear blight, I was greatly desirous of learning your opinion. For it is a matter of no small moment to the lovers of this delicious fruit (and who is not?) whether or not they are to lose it. It is not of so much consequence that we know a great deal about the *disease*—of that, alas! we have sad experience already; but if a *remedy* can be sought out, he will deserve well of his country who shall make it known.

I am not satisfied with any of the various theories put forth as to the cause of this disease. That one form of blight is produced by insects, there is no doubt; but that the other is caused by freezing and thawing, I am sceptical. This doubt, I am aware, calls in question the opinions of some of the most eminent horticulturists of our land, your own among them, as given in the August number of your valuable journal. The views of H. W. BEECHER, editor of the Western Farmer and Gardener, and of Mr. REUBEN RAGAN, one of the best pomologists of the West, first attracted my attention. Their theory is, that the warm,

mild, and sometimes moist weather, which we frequently have in autumn, causes the pear tree to put forth young shoots. These being unripe wood, and readily susceptible to the frosts of winter, are frozen; the sap thereby becomes putrid or poisonous, and being carried into the circulation, the entire system is impregnated with its deleterious properties, and the tree dies. The same effects are said to follow frosts which occur late in the spring, after vegetation has put forth.

If this theory be true, why have its effects manifested themselves so recently? Our climate has undergone no change. The vicissitudes of weather have never been less than now. I have resided upon the Wabash more than twenty-three years, and have known no difference in this respect. I have known almost whole winters that the plough might have run, while others have been cold. Late spring frosts, and late warm humid fall weather, have always marked our fitful climate, yet was the pear-blight never heard of until recently. Individual trees may have died, but the disease never prevailed as an epidemic. On

* The projecting roof will assist in keeping the building cool. In filling the house, back up the wagon loaded with ice, and slide the squares of ice to their places on a plank serving as an inclined plane

the tenth of May, 1834, we had the severest frost I ever knew so late in the season, except the ever memorable summer of 1816. That spring, 1834, had been warm, and vegetation had put forth early. I well remember that the foliage of the Locust, which comes late into leaf, was half grown. Nothing that frost could kill survived it — not a fruit bud from the Oak, Walnut and Hickory, to the Apple, Pear and Peach, escaped. In the fall of that year, the ravages of the squirrels in our cornfields were terrible. They came from the forests by thousands and tens of thousands; for not a nut had the frost left them; yet we heard nothing of pear-blight. We had a severe frost also on the tenth of May, 1845, and a light one on the same morning the present year. To that of 1845, is ascribed the extensive blight of that year; but severe as it was, it was a trifle compared with that of 1834. Like causes should have produced like effects long ago.

Another objection to the frozen-sap theory is, that this form of blight attacks old instead of young trees. Trees which have for many years borne fine crops of pears are cut down, while the saplings in our nursery escape unhurt.

Again: the freezing of sap does not change its properties. That the freezing of vegetable matter in a certain state of development produces death, may be admitted; and if this occurs when branch and leaf are making their first rapid push in the spring, the tree may be killed by the sudden destruction of its leaves, for they are taken away when most in requisition for the elaboration of the sap. By this means, much oak, beech and other large timber, was killed by the frost of 1834. It may also be admitted that the freezing in winter may be so severe as to destroy the vital principle as well in vegetable as animal life.

Of this character were the ravages of the winter of 1835. Death thus produced is not occasioned by deleterious properties imparted to the sap, but by the mechanical force of the frost upon the cellular and woody tissues. What intensity of freezing is required to destroy vegetable life, depending, as it does, upon the habits of the plant, and those habits being as various as the climates of our earth, it is not easy to say; but one thing is certain, and that is, that in our climate the freezing of the extremities of trees is as common as the return of the season of frosts. All our trees are frozen, except their trunks and large branches, every winter, especially the young and tender wood of the past summer's growth; and if an elaboration of the sap, injurious in its consequences, were thereby produced, no vegetable matter would survive a single winter. The economy of the vegetable world rests not on so insecure a basis as this would indicate.

Still one thing is evident — blight is a disease of the circulation. In proof of this, in the summer of 1845, I visited my friend, Mr. RAGAN, who showed me his pear trees, and the ravages of the blight among them. His finest trees presented a melancholy spectacle of disease, decay, and death. Our conversation being directed to the cause of the malady, he mentioned that a few days previous, he had, by way of experiment, inoculated a thrifty young pear tree in his nursery with the sap of a blighted tree, and proposed that we should go and examine it, which we did. He had made an incision about three feet from the ground, lifted the bark as in the process of budding, and injected a small quantity of the diseased sap. We found the leaves of the patient changing color, and emitting that peculiar odor which indicates the incipient state of decay, which is always present in cases of blight,

and upon applying the knife, the inner bark was found to be black from the root to the top, while nothing of the kind appeared elsewhere in the nursery.

The important inquiry arises in reference to the frozen sap theory, what is the remedy? You propose as a preventive, whitewashing the stems and principal branches in autumn, whereby the rays of the sun will be reflected, and too rapid thawing prevented; but if the disease, as this theory supposes, is contracted *at the extremities*, and is conveyed through the system by the circulation of its fluids, can the protection of the trunk and branches avail any thing? It would seem not.

There is no occasion to theorize upon this subject for the mere sake of theory, and I have none that I regard as certainly true; but I strongly incline to the belief that the pear blight is an *epidemic*; that it prevails like other epidemics, and will pass off like them. The atmosphere is, I believe, generally admitted to be the medium by which they prevail, and are carried from place to place. What that subtle principle may be, which pervades our atmosphere, by which infection is retained and transmitted, so that, like the Asiatic cholera, it makes the whole circuit of our earth, human science has not discovered, and perhaps never will; but that such a principle exists, is sufficiently obvious from its effects. Vegetable aliment consists in a much greater degree than animal of the constituents of atmospheric air. The carbon, which forms so large a proportion of woody plants, a familiar fact in vegetable physiology, is conclusive evidence of this. If then the atmosphere is the agent by which contagion is transmitted from animal to animal, there is, to say the least, as good reason to believe that the vegetable world may be affected in like manner. That the potato blight is thus transmitted, I have

no doubt; and that the parasitic fungi which have been described, have been mistaken for the *cause*, instead of the *consequence* of this disease, I question as little.

The question has been often proposed, are we to give up our pears, and abandon their cultivation? I confess, that were I fully impressed with the truth of the frozen-sap theory, I should be inclined to give up in despair, and abandon the hope of having fine pears again. The vicissitudes of weather in our climate are so great and sudden, that I see no reasonable prospect of counteracting their effects. But a kind Providence has gratified the taste of man with this luscious fruit, and I believe he will continue the blessing. We *have* enjoyed it, and I do not believe there has occurred any such revolution of nature and of the elements, that we may not enjoy it still. Trees brought forward now, will probably not be affected by the epidemic, as it will have passed away. In this belief, we may be encouraged, "in the morning to plant, and in the evening not to withhold our hand, knowing not whether this or that shall prosper," but trusting that in due time "we shall gather fruit if we faint not." Yours respectfully.

S. B. G.

Terre Haute, Ia., Oct. 17. 1846.

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REMARKS.—We gladly give place to the observations of our correspondent on this interesting subject; because, though we have strong faith in our views, now pretty generally shared by the country at large, regarding the *frozen-sap blight*, we consider it one of the subjects on which a great deal of practical light may yet be thrown. The theory suggested above, that it is an epidemic conveyed by the atmosphere, is too slightly supported by facts to weigh at all against the observations made by cultivators of the pear in various parts of the

country, all of which strongly point to the freezing of the sap as the cause of the most fatal kind of blight.

Were the cause atmospheric, *its effects would always be seen first at the points of the shoots*, the young leaves and the tenderest sap vessels having the most direct connection with the atmosphere. Its first symptoms also would always develop themselves in the growing season.

Now it is well ascertained, that the first symptoms of the *frozen-sap blight* are the appearance of black and discolored patches or spots on the bark of the limbs or trunk, a long way from the extremities; and also that these are first seen in late autumn, winter or early spring, while the tree is in a dormant state, without leaves, and conse-

quently least susceptible of atmospheric influences. A tree which matured and shed its leaves, apparently in perfect health, will, early in the spring, show these black and dead patches, and that the branch or limb on which they appear, will fall a prey to the blight during the current season, may then be predicted with certainty.

While, therefore, we repeat our advice, to prevent the injurious action of the frost and sun by whitewashing pear trees, in localities where they are liable to suffer from this form of blight, we by no means consider this disease as thoroughly understood, and would gladly gather from observers, in all parts of the country, their own observations and facts as to the actual symptoms of the disease itself.—ED.

The Six best Apples for the Climate of Boston.

BY B. V. FRENCH, BRAINTREE, MASS.

[THE remarks which follow are from the pen of B. V. FRENCH, Esq., who is acknowledged to be the best cultivator of the apple in the neighborhood of Boston. The selection he recommends, is one based entirely on his own practical observations; and we believe, he cultivates in the orchards on his estate at Braintree, a larger collection than any amateur in Massachusetts.—ED.]

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In recommending the six best apples for New-England culture, I must, of course, be understood to be confined to this number of trees. Where a larger space, and greater variety is permitted, several varieties of high merit would certainly be added. In selecting so small a number, you will understand me to bear in mind such qualities of regular productiveness, fair habit of growth, and adaptation to our climate, as

make a given variety a constant favorite with the cultivator.

I have also kept in view a succession of fruit for the table and kitchen, so as to serve as a continual supply from midsummer till the succeeding spring.

1st. EARLY HARVEST. For the best early apple worth cultivating, I should name the Early Harvest. The tree, with me, is a free grower, healthy, a profuse bearer, and the fruit hangs well. It ripens the last of July. The fruit is of medium size, roundish, rather flat, and if used when not quite ripe, it is one of the most excellent for pies, tarts, and cooking generally; and when fully ripened on the trees, it becomes of a fine rich yellow, and ranks high as a table fruit.

2d. THE PORTER. In succession this excellent fruit follows the Early Harvest; it

is also a free growing tree, and a great bearer. The fruit is conical-oblong, yellow; the skin is beautifully smooth and fair, and when fully ripened in the sun, has a fine blush. It is excellent for the table or for cooking, and if properly taken care of, will keep from the time of its ripening early in September, till the middle of October. The many good qualities of this native fruit have made it one of our greatest favorites.

3d. FAMEUSE.* I know of no apple to take the place of the Fameuse for the table at this season. It is in eating from the middle of October, and with care, continues so till February. The tree, with me, is small in size, and a medium bearer; the fruit is of medium size, flat; the skin is red, smooth, and takes a high polish; the flesh is very white, juicy, and, I think, in flavor, excels all others for table use, from the time the Porter is gone till the Rhode Island Greening comes into use.

4th. THE RHODE ISLAND GREENING. The tree is a strong, hardy and free grower, and a great bearer. The fruit is flattened, of a yellowish green, with a dull blush. The flesh is tender, juicy, and of fine flavor for cooking or the table. This fruit is in use from September till February, and is fine

for the table in November and December. It is too well known and esteemed to need any description of mine, having a prominent place in every good orchard.

5th. WHITE SEEKNOFURTHER. This excellent fruit, I am informed, originated in the garden of the late WM. PRINCE, Esq., of Flushing. In point of fine flavor, it excels all other apples that I have eaten. The tree is of medium growth, of a leaning habit, a full bearer every other year. The fruit is rather oblong, greenish with dark spots; and is not a very fair or sightly fruit. Its season is January and February. Its flesh is very juicy, tender, and fine flavored. This variety is not much known in New-England; in fact, I know of but three bearing trees.

6th. BALDWIN. This, our most popular New-England apple, is the universal favorite as a late winter fruit. Its hardy healthy habit as a tree, and the heavy and regular crops it bears, together with its fine flavor, render it indispensable here in every orchard. Regarding the origin of this fruit, I am in possession of some interesting information, which I will at another time lay before your readers. Yours with respect.

Braintree, Oct. 26, 1846.

B. V. FRENCH.

REMARKS ON TWO KINDS OF PEACHES.

BY WM. R. PRINCE, FLUSHING, L. I.

I PRESUME that all pomologists are fully sensible that there has long existed, and still exists, sufficient confusion in the nomenclature of fruits; and it would, therefore, seem proper for the future, that wherever writers have nothing really new to offer,

that they should at least refrain from creating additional confusion.

I feel called to the expression of these sentiments, by an article in your last number, from ROBERT B. PARSONS, the verdancy of which is particularly striking. He has undertaken to describe two peaches, and to correct errors. We will now see how he

* Or *Pomme de Neige*. London Hort. Soc. Cat., and Downing's Fruit and Fruit Trees.

has acquitted himself, beginning with what he denominates the "White Rarieripe."

The *true* White Rarieripe, or Morris White of your work on Fruits, originated in the nursery of my grandfather, the first William Prince, and has been cultivated in almost every collection for above eighty years, and particularly so in this vicinity. It is very accurately described in your work, as well as in the Treatise on Fruits written by myself, in 1831, and by other writers. It is one of the few varieties that are *white at the stone*, and the glands are *reniform*.

The (so called) White Rarieripe of Mr. PARSONS is *red at the stone*, and has *globose* glands. To solve, however, the confusion he has thus made; you will need only to turn to our old friend DUHAMEL, and you will find that the ancient "Nivette" of that author, which has held its title unchangeably for above one hundred and twenty years, has been doomed at last to receive a new title from Mr. PARSONS.

There is not, perhaps, in the whole list of peaches one which has been so universally known as the "Nivette." It was described by LANGLEY in 1729, by MILLER more than a century ago, by DUHAMEL, and by every important French and English author from his time down to the present.

It is found in the Catalogues of the London Horticultural Society, and described by LINDLEY in the Horticultural Transactions, and in LINDLEY's Guide to the Orchard and Kitchen Garden, &c.

To come to our own shores, it is described in the Treatise on Fruits published by me in 1831, in KENRICK's Orchardist, and in your Fruits and Fruit Trees of America.

The descriptions in the works referred to, are so full and explicit, that a child could scarcely mistake the fruit, and no such blunder could possibly arise where there existed any actual knowledge of fruits.

We now come to the "Green Catharine," and I regret to find that even here, Mr. PARSONS has been equally unfortunate. For two years past, Messrs. PARSONS & Co., and a gentleman who obtained his trees from them, have exhibited the spurious variety now described, which has been pronounced erroneous by the best authority. And whether there is any sinister motive in regard to this fruit, which they have been selling trees of for years, I will not pretend to say; but it does seem rather singular, that they should, at this late day, endeavor to give the impress of accuracy to a spurious variety, and to stamp with inaccuracy a variety cultivated by my father under this name before either of them was born, and which has been disseminated and well known throughout the Union for more than fifty years.

The genuine Green Catharine was first brought to notice by my grandfather, and I have now before me a catalogue of *my* late father, dated over fifty years ago, in which its qualities are stated. I remember to have heard him say, that he believed it to be of European origin, and this will explain why it has never been designated in his catalogues as an American variety. In the year 1820, it was sent by him to the London Horticultural Society, with a very large collection of other varieties. There it still exists, and its accuracy has never been questioned. Judge STRONG of this town, one of the most intelligent amateur pomologists in the Union, states that many years ago my father gave him some scions for budding, with the remark that they were the genuine Green Catharine. He has had bearing trees up to the present time, and their fruit is identical with those in my nursery. Any amount of similar proof could be deduced, and personally I know this variety to be genuine, for at earliest childhood,

a very large and favorite tree stood near my father's mansion, which cheered us with its abundant crops.

Notwithstanding the existence of such conclusive evidence, Mr. PARSONS, in announcing that his is "*quite a distinct fruit from the Green Catharine of the London Horticultural Society's Catalogue*," refrains from acknowledging his own inaccuracy, but seeks to conceal it by arraigning the accuracy of the London Horticultural Society, the real object being to arraign that of my father and self; and he concludes by saying, "*I presume they have received their tree from some doubtful source.*"

I forbear all comment, for he who runs may read; but will conclude with a short description of the genuine variety referred to.

GREEN CATHARINE, *Lond. Hort. Soc. Cat.* Fruit of the freestone class, very large and showy, round, pale green, with a red cheek when exposed to the sun, but devoid of redness when shaded; flesh tender, very juicy, of peculiar flavor, with rather an excess of acidity, bright blood-red at the stone, the redness extending somewhat into the flesh; the skin may be peeled off completely and readily; the period of maturity is from September 10th to 20th. Being a very beautiful fruit, and of large size, it would command the highest price at market, but is seldom met with there, and seems to be entirely unknown to the orchardists of New-Jersey and Delaware. A powerful sun is indispensable to develop this variety in size, beauty and flavor. It is consequently insipid in the climate of England, or in any shady or cold location.

WM. R. PRINCE.

Flushing, Nov. 12th, 1846.

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REMARKS.—We give place to the foregoing solely for the pomological remarks, and

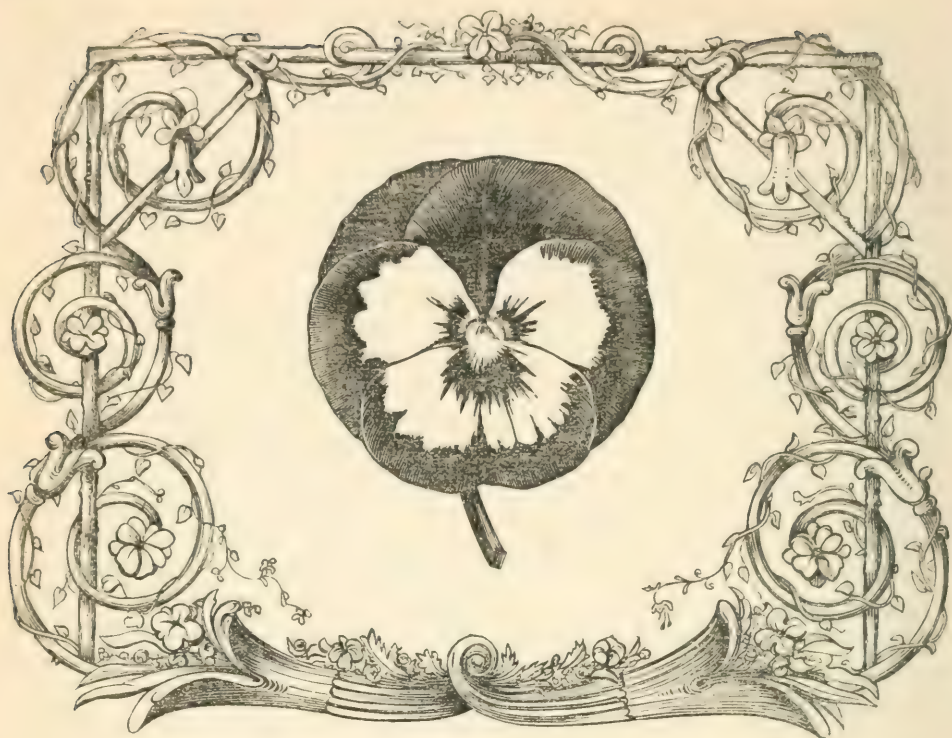
entirely repudiate the *tone* in which it is written.

Mr. PRINCE, as it is well known, is fonder of nothing than a controversy with a rival nurseryman—or as he expressed it in one of his former communications to us, "a fair fight." Our readers, therefore, must make due allowance for the motives he imputes to Messrs. PARSONS, whom we believe to be men of integrity.

Regarding the two fruits themselves, we will observe, first, that the description Mr. PARSONS has given, in our last number, of the White Rareripec peach, does correspond almost precisely with that of the well-known *Nivette*. We remarked at the time of publishing it, that all our efforts to find a White Rareripec among the many bearing this name in various gardens, had been unsuccessful. They all proved to be the Morris White Rareripec—a peach, we may remark, very variable in appearance, and maturing at various times in various soils, but always white at the stone, and always having reniform glands. We think the presumption, therefore, a strong one, that the peach described by Mr. PARSONS is the *Nivette*.

We cannot find any reason for doubting that the *Green Catharine* of the London Horticultural Society's Catalogue is correct. Indeed the fact that it is only pronounced of third quality there, while Mr. PARSONS finds it of the first quality here, only proves that it is not suited to the English climate. Scarcely one of our high flavored peaches except the George 4th, retains its character in England. There is not sun enough to give them their natural flavor.

Mr. PRINCE's description of this latter peach is imperfect, inasmuch as he does not describe the *glands* of the leaf, or the size of the blossoms, two points without knowing which, nothing can be determined in this fruit.—ED.



THE CULTURE OF THE PANSY.

FROM THE LONDON HORTICULTURAL MAGAZINE.

[ALL our readers are familiar with the little three-colored Violet, or Heartsease, *Viola tricolor*, that hardy and bright little spring blossom common in every garden.

But few of them are, however, aware how great a change the English florists have effected in this plant within a few years. The difference between the little ragged and meagre original species, and the large and beautiful varieties that now grace the florists' shows in England, is indeed so great that any one, ignorant of the changes that may be brought about by the assiduous and patient skill of a thorough cultivator, might well be pardoned for doubting if they were the same plant.

There are very few good collections of Pansies in America. Though a very hardy plant, yet the softness of its stalk is such, that it perishes on a long sea-voyage, and it is therefore, extremely difficult to import the finest English sorts.

There is no difficulty, however, in obtaining in the seed shops of our principal cities, seed saved from the best English Pansies. This germinates freely, and thus one may soon be in possession of hundreds of seedlings. Among them will usually be found many of large size and great beauty. These should be preserved and propagated, and thus, by perseverance, a good collection may soon be formed. In the mean time, to as-

sist our floricultural readers, we lay before them an excellent article from the London Horticultural Magazine, which gives the whole treatment of the plant, accompanied with Illustrations showing the high style of perfection to which it has arrived in England.—ED.]

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“There is scarcely a florist’s flower which repays the grower so well for a little extra care as the Pansy, and perhaps there are few which are sooner spoiled or lost, if neglected. It may appear strange, but it is nevertheless true, that the finest variety in cultivation will, if planted out, and left to itself, degenerate in size and color so completely, as not to be recognized at all, and its constitution will be so completely altered, that cuttings from it can never be recovered, that is to say, the bloom from such cuttings can scarcely ever afterwards be got so fine as the originals were at first. This is an important fact, because a man may easily spoil his whole collection. We need not exemplify this better than by calling the recollection of Pansy growers to the state of a neglected bed. Have they not observed that the plants become straggling and weak? the flowers small and out of character? and that they might look in vain for a bloom fit to show even among the best varieties? Follow the same bed somewhat longer, and the plants get yellow, the foliage small, and probably the half of them dwindle and die altogether. Scarcely one of the flowers will be better than wild ones, and if cuttings be taken in that state, it will be impossible to make them strong plants under two or three generations, and perhaps never. The general cultivation, therefore, of the Pansy requires care and attention, although the management is simple, and those who fancy we are too particular in our directions, will find to their cost that very trifling omissions will damage their stock, and keep them far behind other competitors in the size of their blooms, and the character of their flowers. It is perfectly unnecessary here to describe the flower. The botanical name for it is *Viola tricolor*, or *Three-colored Violet*. They are the same genus, but no more like one another than the Scarlet Ge-

ranium is like the new varieties of Pelargoniums, now so much in cultivation; nor do they seem at all likely to breed or hybridize; they appear, in fact, very distinct families. The former paper, in which the properties of a perfect Pansy are given, will sufficiently instruct the amateur as to the kind of flower he should choose when in bloom; but as he may probably wish to begin before he has an opportunity of seeing a collection, he must trust to a respectable dealer for his first few plants. We suppose these to come, as they generally do, very small and poorly rooted; but if he be fortunate enough to get good strong plants in pots, he will be much forwarder. The first thing to look to is the bed or border in which they are to grow. If it is intended to shade them on all proper occasions, it may be in any open space in the garden; but if not, they should be planted where the sun does not shine the three or four hottest hours of the day. If this bed be composed already of good loam, let there be six inches of good thoroughly rotted cow dung laid all over it, and well forked into the top eight or ten inches of the loam; and this can only be effectually done by repeatedly working it with a fork, and once or twice digging it over. If there be no proper stuff, have the mould dug out one foot deep, and fill it up with two parts good sandy loam, and one part cow dung rotted into mould, or for want of this, a mixture of half ordinary dung and half leaf mould; and if the latter cannot be had, all dung must be used, but in no case must dung be used until it is perfectly rotted into mould. Of course, these must be well incorporated. In this bed must the plants be placed not less than six inches apart, and the best time to plant them is April or October—in the former case there will be no frost to hurt them, and in the latter there is time to get established before the winters set in. If the plants are long, pinch out the tops, that they may throw out side branches. If short and bushy, they may be left as they are. Nothing better can be done for them, than throwing a little loose litter over them, to protect them from hard frosts, and to pick off all the blooms that come before the plants are well established; for as the blooming un-

questionably takes away the strength of a plant, flowers should not be allowed to perfect themselves until the plants are strong enough to bear them well. The flowers will in time come large, and fine in color. Advantage should be taken of the first side shoots that can be spared without injuring the plant, and if these are carefully taken off close to the main stem, they may be struck under a hand glass in a shady border.

"The cuttings should not be longer than two inches; and to prepare them for striking, the leaves should be taken off halfway up. The compost to strike them in must be the same as the bed in which they grow. Let the hand glass be about the size that will cover the quantity to be struck, and not more; let the place be well dug, and the lumps well broken. Rake the surface smooth, make a mark the size of the hand glass, by pressing the edge of it on the mould; plant the cuttings down low enough to cover the inch that is stripped of the leaves: they need not be more than an inch apart, and the mark made by the edge of the glass will show how to keep them within the space. The best way to put in the cuttings, is with a small bit of smooth twig, or the point of a skewer. Water them to close the earth about them, and cover them up, shading them from the sun, if any should reach them, and water them occasionally, for they must never be dry. It will soon be seen, by the growing of the cuttings, when they are well rooted; but all bloom buds must be picked off as soon as they appear. This system of taking the side shoots from the principal bed, should be pursued as long as the flowers keep good; and when they begin to get smaller, cut them in close, and let them grow again. But, in the mean time, prepare another bed to receive your struck cuttings; for it is only by a constant succession of young fresh struck plants, that you can hope to keep up the size of the flowers. It is probable that the old plants which have been cut in may grow again, and throw good flowers; but if not, dig them up at once, and throw them away. It cannot, however, be too strongly impressed upon the mind, that the entire dependence must be on young plants, and there-

fore no opportunity should be lost of taking cuttings, whenever they can be spared, from the plants in flower. Those who sell Pansies will, instead of throwing away old roots, part them, and plant out the pieces. If the plants are so treated before they degenerate too much, they may turn out well; but no plant will throw a bloom so strong as those which have been recently struck, and are well rooted and established. When Pansies are to be grown in pots, the compost should be the same; the pots should be thirty-two to the cast; the crocks with which they are drained should reach one-fourth up the pot, and the plants should be potted from the border where they are struck—they must be watered well to close the soil about the root, and be placed in the shade until they are established. If you have a common garden frame and light, they should be placed in it, and shut down close a day or two, and well shaded with mats or cloths. Picking off the blooms until the plants are established, and also pinching out the heart of the main shoot, to encourage the side branches, should be attended to as much with your new plants, as with the first you have; and, in short, Pansy-growing must be a constant succession of bed-making, cutting back, striking cuttings, and replanting, the whole year round. When old plants are removed, the bed must be dressed two or three inches thick with cow dung, or the dung of an old melon bed, rotted into mould, or leaf mould, well dug into it and mixed, to keep up the proper degree of nourishment for the new plants, so far as regards the management of known good varieties.

FROM SEED.

"The very best flowers that can be purchased, ought alone to be admitted into collections, and therefore it cannot matter how the seed is saved; but if the collection be more general, it is better that half a dozen plants of the very best varieties, according to the properties laid down by us in the early part of this work—that is to say, such as are round, thick, flat, smooth-edged, and well colored. Let those be placed, if possible, in a part of the garden where there are no others; let them be cultivated with

the greatest care, as if they were for showing, and let the best of the flowers only be left for seed. This must be watched daily that the pods may not split, and the seed be lost, yet it must be ripe. Half a dozen of the pods, from the best flowers of each plant will be enough; for as the flowers get smaller, the seed will be worse. Let the pods when gathered, be placed in the shade to dry, taking care that they are in a deep dish or box, to prevent their flying away when the pods burst. The best time to sow seed is May, because they will bloom before the summer passes. It should be sown thinly, in pans of compost, similar to that in which the plants grew, and but just covered with mould; they must be watered occasionally, and will be best under glass; if there be no frame, it may be placed under a hand glass. As soon as they are large enough to plant conveniently, let them be planted in beds similarly made to those for matured plants; but if it be in an open space, they must be shaded altogether until they have established themselves, after which they need only be shaded during the few hours of the hottest part of the day. They must be kept exceedingly clear from weeds, and regularly watered, if the weather be dry long together. As they bloom, throw away every one that has not some strong recommendation, looking more, however, to form than color; and mark those which you intend to keep, but discard at once all those with their flimsy petals, ill-shaped flowers, notched or rough edges, cloudy stained indistinct colors. If there be any really good flowers, treat them as you are directed with purchased plants—that is, increase it by cuttings; and besides the ordinary way of doing it, cut the plant back early, that it may throw up side branches in more abundance, and even part the plant itself, if necessary; as fast as the cuttings get rooted, treat them all as you did the old plant, until you have as many plants as you think proper; but generally, if it be really good, it ought to be propagated very largely, so that a good stock may be provided before the variety is let out.

CAUSES OF FAILURE.

“ Among the causes of failure with young

beginners there are two, which ought above all things to be avoided. The first is removing plants from light soil to that which is stiff; the other is removing them from stiff soil to that which is light. The only way to avoid the evil is to wash from the roots all the old soil, and plant it in the new very carefully, that the earth may be well closed about the fibres. If a plant be brought from light soil, and is planted with a ball of earth about it, the light soil is confined by the heavy, which forms a complete hard wall round about it, and the plant is infinitely worse off than if it were in a pot; the water which is given to it cannot run off freely, and the roots will often rot, and the plant gradually dwindles; on the other hand, if there be not a proper supply of moisture, the stiff soil becomes baked, the root cannot penetrate it, and therefore dies or starves into a bad habit. If, on the contrary, the ball of earth about the roots is stiff, and it is planted in light soil, the water given to it does not penetrate the ball, but runs away directly through the light soil, and in a few days, the moisture being completely absorbed by the surrounding earth, the stiff ball will become baked hard, and the plants very shortly feel the effect. We have seen the effects on both very frequently, and particularly when the mismanagement has occurred to seedlings. Most raisers of seedlings are too careless about where they plant them out; they fancy that they may put them any where till they see the quality; and they think that where they find a good one, it is very easy to remove it into a better situation; so indeed they might; but on changing the soil, the entire root should be cleared of the old stuff, and the plant should grow entirely in the new. Perhaps the very best seedling that ever was raised, was lost entirely by a change from a heavy but rich loam, where it was growing well, to a light rich soil, made up on purpose for it. The very object of the grower in removing a large ball of earth with it, so as not to disturb the roots, was the cause of its dwindling, even till the constitution of the plant was destroyed; when, lest it should be lost, two very celebrated growers were supplied with cuttings, but it never recovered; and when the old

root was taken up, the ball of earth was baked hard: not a single fibre had come through into the good light soil, and the variety was lost. A few persons may remember the flower, which was a deep purple, very round, as thick almost as a bit of velvet. It was called the Metropolitan, and was exhibited twice—once at the Red Lion, Hampton, and the second time in Mr. Flanagan's window; and Mr. Wakeling took a sketch of one, though not the best bloom. One of our most successful growers offered £10 for the seedling plant before it was removed; and notwithstanding all the fine flowers which have been raised, we may safely call the loss of the Metropolitan a serious disappointment to the growers of the Pansy. Since this occurrence, we have seen many very good collections suffer much from the change of soil, without noticing what was about their roots when they were bought in, and acting accordingly.

“There is another cause of great failure, which many growers have not noticed even up to this time. It is not an uncommon thing to see in a bed of Pansies, plants in full health one day, and dead down to the surface the next. We have often heard this attributed to an attack from some grub, particularly as the growers, on looking to the stem, find, as they fancy, the inside hollow, where the grub has eaten away the inside. This is, in general, pure fancy. The stem of the Pansy is naturally hollow; but in nineteen cases out of twenty, the enemy is the wind. In very gusty weather, if the bed is exposed, many of the plants may be seen blown all on one side at every gust, and when the gust is over, fall back into its place. If this occur, when there has been recent moisture, either by watering or rain, this constant bending backwards and forwards bruises or breaks the single stem, by which even a large spreading plant is held to its root; and we have seen, upon an average, after a windy night, a fifth, perhaps, of the number withered the next morning, and either broken quite off, or hanging by only one side of the stem, which being hollow, may be seen to have the appearance which a pink has, when the wireworm has gone up the very heart of the plant. The best preventive is to have the bed where it

is sheltered from the wind; but if this cannot be, the next best is to peg down the principal side branches with hooks made of fern, or birch twigs, which must be cut like a hooked walking stick; this prevents the wind from blowing up one side of the plant, by which it must suffer, even though it be not actually broken.

POT CULTURE FOR SHOW.

“We hope and believe that the Pansy will, hereafter (though perhaps not directly) be shown in pots; and with this impression we add a few instructions for a mode of culture, adapted to show off the plant as well as the flower. We have already given directions for pot culture, but that is only when pots were to be a substitute for growth in the ground, and when the flowers were to be cut from the plant; we accordingly directed the very first potting (from the cutting bed where they were struck) to be in size 32-pots; where, however, the pots are to be shown, it is necessary to obtain a large quantity of bloom and a bushy handsome plant. In this case, the struck cuttings must be first placed in 60-sized pots, and the top of the plant must have the leading top pinched out; this will cause side branches to come out; and if any one of these take the lead, and grow stronger than the others, it must be checked by the same means. All bloom buds must also be picked off. They must be constantly watered, that they may not be distressed for moisture, for they are very differently situated from those in the open ground; and they must be shaded from the heat of the sun, whenever it is strong, though the morning and evening sun is beneficial. As soon as the roots become matted to the sides of the pots, they must be changed for size 48; and the plants by this time should be bushy and handsome. The blooms may now be allowed to come forward; as they are opening, instead of plain water, give them liquid manure, which should be decomposed cow-dung—say one quart of the decomposed dung in two gallons of water, stirred up well, and be allowed to settle for half an hour. It is not that the soil is in want of nourishment, being a great part of it dung, but the roots, which take in the greatest portion of nou-

ishment, are now at the sides of the pot, and water rather washes that away than draws it, and it is better for the plant that it should have it in the water, the greater part of which will pass down the sides of the pot among the roots. With regard to the time of year for this culture, it rather depends on the period of exhibition than on the season, for the Pansy can be got in perfection at almost any time, and especially in pots; because as these can be kept in frames blooming all the winter, there is no difficulty about it. But succession is as important with this as with open air culture, and therefore they ought to be potted in March, April and May, to succeed each other, and when they have done their office they may be consigned to the border or bed, either as they are, or cut back, but generally they will be gay out of doors, when they are turned out from the pots, and bloom fresh without being cut back. We have said nothing about propagating by layers, chiefly because we set our faces against it altogether, for reasons pretty well explained at the beginning. They do not make such good plants as the side shoots. Pot culture may be conducted in frames or out of doors, but all plants in pots, when out of doors, get dried by the wind, and heated by the sun, unless plunged up to the rim, and they are apt to push roots through the bottom of the pots into the earth, and they then receive a check upon removal.

"The properties of the Pansy have been already officially announced and acknowledged by most, if not all floral societies. We know of no exception; but a few remarks on the advantages of each separate point will not be out of place. It seems conceded on all hands that form is the first consideration in all flowers, and in the Pansy the circular was insisted upon as the most desirable, even when the attainment of it seemed impossible. However this may have been objected to in the first instance, on the ground of its being unattainable, it was evidently founded on a sound judgment of what would appear the most rich and beautiful; and it was obvious that the nearer a flower could be brought to a rich and beautiful form, the better it must be, whether it could or could not be produced quite in perfection. Now

it is impossible to conceive any thing more silly than to set up any distinct form short of perfection, for then indeed would it be setting a limit to improvement—when this form had been produced, no pains would have been taken to surpass it, and if by any chance it had been surpassed, there would have been at once a difference of opinion. All who had been led to believe that a particular form was a criterion of a good Pansy, would have maintained that those which were of that form were best; while all persons of taste, who saw the increased beauty of the one which surpassed it, would have condemned the established rules, and the result would have been two sets of laws to govern the choice of a flower, and endless bickerings among the growers and judges. For this reason, it was necessary that the person who laid down the test of a good flower, should know what would be the most perfect form, and at once to fix upon it, without reference to whether it could or could not be attained. There is the greatest proof of the correctness of this view, in the actual fact, that the circular form has been so nearly attained, that the horticultural world has been convinced long since of its superiority over any other that imagination could suggest. Another point required by the (we must say) dictator in these matters, was the thickness of the petal, a property which speaks for itself—the firmness of the flower—the richness of the surface—the strength of the color—and the permanence of a bloom, whenever the petals are thick, are so conspicuous by comparison with a thin one, that there needs no argument upon the subject; for a thin petal is flimsy, and curls up soon—there is no firmness to keep its form; the colors are poor, and the surface is invariably like paper instead of velvet. Smoothness on the edge is a quality which is constantly recognized by every person of taste. There is nothing which so completely spoils a flower in the eyes of every body, as notched, or sawed, or rough uneven edges—the bloom looks mean and untidy, as if it were gnawed by vermin—compared with one which is the reverse, it is, even to an indifferent person, worthless, let its colors be what they may; and the principles on which all real good properties should be

founded cannot but be sound when this is the case. How many pretty varieties are there spoiled by the common but mortifying blemish of an indentation in the under petal? and what is there can make up for it? So far as we are concerned, there is but one consideration that would make us look at one a second time, and that is the chance of its being a temporary instead of a permanent blemish. It does happen, that when the bloom of a Pansy is opening, the very spot on which this blemish occurs is the first exposed, and therefore does occasionally meet with a check, which actually causes the indentation, when it does not really form a permanent feature in the flower.

"This would always make us unwilling to throw it away, until we had ascertained beyond a doubt that it was a permanent fault. The next property which seems to have been set down as indispensable, is that the bloom should be flat. The only people at all inclined to quarrel with this, are the artists, who for the most part seem quite unhappy, if they may not show their dexterity by curling a leaf or twisting a petal; a very poor daub may be made interesting to the vulgar, by the touch which shows a deformity; but where the artist has nothing to assist him, and must place a specimen face to face with the spectator, representing it perfectly flat, without a wrinkle, that shall afford him the clap-trap of strong light and shade, he has his work to do in giving proper effect. Still, those who see one flower hollow or crumpled, and the other perfectly flat, will not hesitate an instant in choosing the latter. Thus, so far as we have gone yet, the properties are proved to have been founded on principle.

We come now to a property which relates to color and not form. It is said that the two upper petals must be uniform, be the color or the disposition of it what it may; that the two side ones should be also uniform, and the under petal be the same ground color as those on the side. This led to a good deal of controversy, or rather to difference of opinion—for those who disputed it were not bold enough to dispute it in writing. That this, however, banished many flowers from choice collections is certain, and that it affected the sale of new flowers, intended to be held up as good ones,

is not less true. Mr. Thompson of Iver, the most extensive raiser of seedlings at the time, disputed the propriety of the distinction, and held that the bottom-petal might be different from the other without disparagement. This requires no more pains to controvert than any other of the notions which have been entertained by inexperienced or interested persons. In very many varieties the lower petal has a yellow tinge, while the two side ones are white. It is impossible to conceive how mean, poor, and imperfect, one of this description appears in comparison with flowers which have but one pure white or yellow in all three petals; and it is not long since we saw some of May's and Cook's favorite flowers with pure white grounds, compared with others with two colors, and heard May himself—now by far the largest grower and raiser of the Pansy—admit, unequivocally, that it was almost as important a point as any other property; and but a few weeks before, Mr. Thompson had his own flower, Eclipse, pointed out to him as the best yellow ground, and confessed, most reluctantly, its superiority to every flower which had two shades. It is in fact, only necessary to compare the flowers which are perfect with those which are not, and the brilliance of the one, and the dulness and patchy meanness of the other, will forcibly strike the most inexperienced grower of the propriety of this once questioned but now universally admitted point.

"We believe we have now gone through the leading properties of the Pansy, not because the gardening world were unacquainted with them, but for the purpose of showing that there were sound reasons for laying down every point, and that there is not one which can be questioned.

VARIETIES OF STYLE.

"Various are the tastes of the public as to the beauty of a Pansy. We like the following, fig. 70.

"The next, fig. 71, is a very different style, but is quite as pretty as the last in the eyes of many people. The bright band all round the top petals has been seen, both white and yellow, to ill shaped flowers.

"It will be seen that the principal features

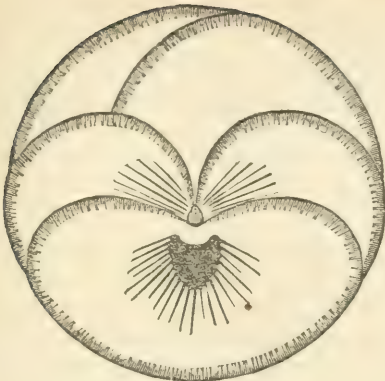


Fig. 70.

are adhered to; the two top petals are alike, the two side ones are uniform, and the bottom is consistent with them. The ground



Fig. 71.

colors might be deep yellow, light yellow, sulphur color, straw color or pure white. We should not quarrel with any body's taste as to colors, so that there were not two ground colors on the three lower petals. The different varieties given here, are merely to show that scarcely any flower exhibits such perfection and so great a contrast; imagine all the different colors found in the Pansy to be applied, one after the other, to flowers thus marked, yet there is nothing at all improbable in the attainment of such marks in every color that we have distributed among them. How different would all these marks appear under different circumstances. Suppose one had them in dark

blue, another chocolate, a third purple, a fourth light blue, and one set with the ground color yellow, and another with white. The variety would be endless. There is, however, great room for improvement among the Pansies now in cultivation.

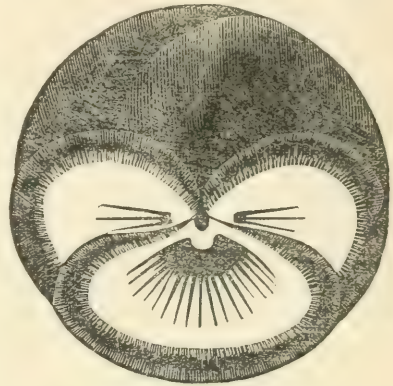


Fig. 72.

"The prevailing faults are flowers long instead of round, bottom petals indented: the edges rough, the lower petal tinged or patched with yellow, while the side ones are white. We do not complain of the bright spot of yellow which may frequent-



Fig. 73.

ly be found within the rays or stripes, for it is only a blemish when it reaches beyond the eye. We ought to observe, that except the first figure, which is a fair representation of the flower which was substituted for

Robin Adair, the figures are ideal, and are merely intended to show some of the leading figures into which the colors break in different varieties. To extend this variety is the object of cultivation; and when we look to a bed of seedlings, and find hardly

two alike, we may set down the Pansy as one of the most encouraging of the flowers to raise from seed; and we should like to hear of private growers who can attend to it, commencing industriously a task which offers so much gratification.

AN EXCELLENT NEW VEGETABLE.

BY LEVI BARTLETT, WARNER, N. H.

TO THE EDITOR—*Dear Sir*: As the following communication respecting a vegetable of the cabbage family, new in this country, may interest your readers, I send it for the columns of THE HORTICULTURIST.

Respectfully yours. JOS. BRECK.

Boston, Nov. 10, 1846.

J. BRECK, Esq.—*My Dear Sir*: In a package of seed, I received from you last spring, there was one paper marked "Couve Touchada, a delicious vegetable." I sowed the seed at the same time I did several kinds of cabbage seed; the seeds came up well, but all my plants suffered badly, while in the seed leaf, from the small black fly. What of the several kinds escaped, were transplanted at the proper time. The "Touchada" exhibited in its appearance no material difference from common cabbages. Some time in July I wrote to you stating that fact, and making inquiries of you respecting this "delicious vegetable." Your answer was, that "you knew nothing about it; your seedsman in London forwarded it, marked as upon the paper in which I received the seed."

I suppose from that, it is a new plant in this country. Since I received your letter, I have seen some notice of it in the Mark Lane Express of May 18, 1846. In that paper, in answer to the inquiries of a correspondent, who wishes to know the "exact difference between broccoli and cauliflower,"

there is a great variety of cabbages named, and among them is the "*Couve tronchuda* or Portugal Cabbage," which, I presume is the kind you sent me, and it should have been written *tronchuda*, not *touchada*. [This is the correct continental term.—ED.]

I had about fifty plants; they were set about two and a half feet apart. They grew very rapidly, and I soon found they were too near; in a rich soil, from four to five feet distance would be near enough. The leaves are very large, as also the leaf stalk, and it is very white, and extends into the middle of the leaf in a palmated form, and gives the leaf a very unique appearance.

In consequence of the severe drouth we have had, they have not much of a head, like a cabbage, (if they ever have any,) and not thinking them of much value, I gave many of them to my cows, before I had any of them cooked, which I now very much regret. A few days since, I took a quantity of leaves to cover over some potatoes that I was steaming for my hogs, and found the large leaf stalks nearly the size of my wrist, after being steamed, were quite soft and pulpy, like asparagus. Since then I have had some of the open loose heads cooked, the same as cabbage, and find they are most fully entitled to the appellation of a "*delicious vegetable*." And to my taste, and that of my family, we prefer this "Portugal Cabbage" to any thing of the cab-

bage kind we have ever eaten, not excepting the broccoli and cauliflower.

It is an old saying, the proof of the quality of the "pudding is in the eating of it," and in accordance with your wish, I forward you a sample, hoping they may arrive safe, and prove as agreeable to your taste as they have to mine.

I also received a paper of seeds, marked "German Greens, beautifully curled," part of which I sowed on a deep rich sandy loam, and I think it the very best plant for greens that I have any knowledge of. I had about forty plants. The leaves much resemble those of the sea-kale, abundant, very curly, and succulent. I have had them cooked, at the same time with beet leaves and other kinds of greens, but the German Greens have, with us, the preference over all others. They bear *plucking* remarkably—take off all the leaves but a few small

ones at the top or crown of the plant, and in a few days there will be a new supply, which may be kept up through the whole season. I think it must be one of the very best plants to supply a market with greens. I shall let a part remain where they grew, and take up a part for the purpose of setting them out next spring for early greens.

Of the several varieties of broccoli and cauliflower seeds you sent me, some of them promised to be remarkable specimens, as the leaves were a yard in length; but from the 25th of July up to the 25th of October, we have scarcely had rain enough to lay the dust, so that very few of them flowered, and they manifested too strong a disposition to shoot up into blossom branches, and run up to seed. Most truly yours.

LEVI BARTLETT.

Warner, N. H., Nov. 2, 1846.

Description of a Cheap Vinery for Foreign Grapes.

BY THE CORRESPONDING SECRETARY OF THE NEW-JERSEY HORT. SOCIETY.

DEAR SIR—In compliance with your request, I have obtained permission of CHAS. CHAUNCEY, Esq., to give you a description, for publication in the Horticulturist, of the vinery in his garden in Burlington, the success of which has proved clearly that the means of raising the finest foreign grapes are within the reach of any man who has a garden and a few hot-bed sashes.

The vinery in question is, in fact, nothing more than a large hot-bed frame of rough boards, the back wall being a board fence about ten feet high, the front three feet high, the sides sloping to it, and rafters across of sufficient strength to support the hot-bed sashes. The whole structure was put up by the gardener, Mr. JAMES MCKEE, and might be built by any

farmer out of whatever stuff might be most easily procured. The vines are planted as in any vinery; that is the front row of vines have their roots outside, and those against the back wall, inside the house.

The main point of the discovery, however, which Mr. MCKEE has reduced to practice, is, that he uses no other glass than the sashes of his hot-bed frames, which are laid on the rafters of the vinery, after they are no longer wanted on the hotbeds, say from 1st to 10th of May. They are thus, you will perceive, turned to account at a season when they would otherwise be quite useless. During the winter, the house is left entirely open, which in this latitude may be done with safety. If necessary, the vines might be laid down and covered,

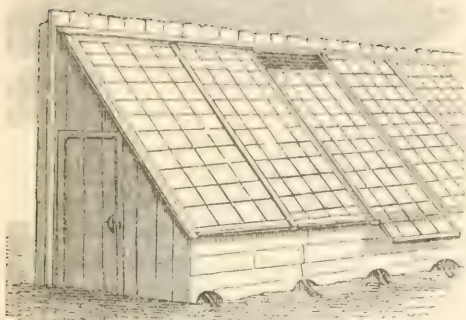


Fig. 74. A Cheap Frame for Grapes.

or the house covered with boards during the winter; but as Mr. CHAUNCEY's garden is in a sheltered situation, the vines are found to require no protection.*

The sashes are not made to slide, and the house is only aired by the door, or by inserting bits of wood under the lower ends of the sashes so as to raise them an inch or two. But it is one of the peculiarities of Mr. McKEE's culture, that he gives *very little air*, and *no water*,† as his vines are never showered. His vines are mostly Black Hamburg and Chasselas, and are five years old. They have borne abundant crops for two seasons past, and the grapes have received premiums at the exhibitions of the Pennsylvania Horticultural Society, both last year and the present; and I can assure you, from personal inspection, at various times during the past season, that the growth of the vines has been remarkably vigorous and healthy.

I cannot doubt that this discovery is destined to prove of great importance, because

it proves clearly that market gardeners and others, who have generally a quantity of hot-bed glass, which is stowed away and utterly useless during the summer, may make use of it in this way for their own profit, and for the benefit of the public at large.

The frame may, of course, be made of whatever size the proprietor chooses, and the management of the vines may be the same as in any other house. Mr. CHAUNCEY's house is about twenty-five feet long, by twelve wide; the back wall, which, as I observed before, is formed by a tight board fence, is about ten feet high, and the front three feet. Very truly yours.

H. W. S. CLEVELAND.

Outlands, Burlington, N. J., Nov. 2, 1846.

.....

OBSERVATIONS.—We have had such excellent accounts of this *cheap mode of growing foreign grapes*—a great desideratum to thousands in this country, that we have much satisfaction in laying Mr. CLEVELAND's letter describing it before our readers.

Mr. McKEE's mode of managing his vines is highly successful. The size of the structure, as our correspondent remarks, may be varied at pleasure. Our cut shows one narrower than the one described. We think, perhaps, it would be better, for the sake of simplicity and economy, to make the house *narrower*, and dispense with the row of vines inside. This would obviate altogether the necessity of watering the border inside. The border for the front row of vines, we would make entirely outside, and conduct the stem through as shown in the figure. This border should not be less than ten feet wide, and two and a half feet deep, and of course trenched, and thoroughly enriched before planting the vines.—Ed.

* We should advise that the vines be protected after the autumn pruning is completed.—Ed.

† I mean on the foliage, the roots of course are watered.

NOTES AND QUERIES ON LAWNS.

BY A NEW-BEDFORD SUBSCRIBER.

DEAR SIR—I read your editorial in the last Horticulturist, upon lawns, with much interest, and notice you recommend a mixture of Red Top and White Clover, without reference to the soil, whether it is wet or dry.

LOUDON, in a little work upon "Gardening for Ladies," published 1841, recommends the Crested Dog's-tail Grass, *Cynosurus cristatus*, as the best for sustaining drouth and heat, as its roots penetrate so deeply into the ground as to keep its blades green, while all grasses around it are quite brown from being dried up.

"The Hard Fescue Grass, *Festuca duriuscula*, is another kind which stands drouth well, and is a fine dwarf grass, and springs early."

"The Fox-tail Meadow Grass, *Alopecurus pratensis*, one of the principal grasses in rich natural pastures, should always form one-fourth part of seeds for a lawn."

"The Sweet-scented Spring Grass, or *Anthoxanthum odoratum*, grows best in deep moist soil; but it is worth sowing in all situations for its fineness, its dwarf growth, and for its habit of continuing to vegetate and throw up fresh stalks nearly all the year—very fragrant in new hay."

"The Common Meadow Grass, *Poa pratensis*, is good for Lawns, as, though of slow growth, it has creeping, permanent roots."

"The Short Blue Meadow Grass, *Poa cerulea*, may be added, for its deep blue tint, which gives a richness to the general color of the turf, and it sustains no injury from drouth."

LOUDON goes on to say, the Meadow Fox-tail is very often bad, only one-third of the seed germinating. "Sow of the mixed grasses about four bushels per acre, but if

an immediate effect is wanted, add one and a half bushels of the common White Clover." These directions are intended for an English climate, and what would stand an English drouth well, might perhaps be burnt to a cinder here, exposed to our unclouded sun. As my grounds suffer from drouth, being on a light sand and gravel subsoil, I wish to ask if you think the White Clover and Red Top more suitable for dry places, than the above grasses, recommended as particularly adapted for their properties of standing drouth in England. I am subsoiling and trenching my ground, and intended to let it lie for a year before laying it down, to kill, if possible, the grub, which has destroyed the roots of the grass. Can you recommend any application to the surface for the latter purpose?

Is there no danger in subsoiling and trenching a soil already too dry, that it will increase the difficulty, by allowing the moisture and liquid manure to pass below the reach of the roots? Perhaps, if not asking too much, you will favor your readers with a few simple directions for the best mode of treating an acre or two of ground about a house in grass, with clumps of trees, etc., the grass wiry, scraggy, coarse, surface uneven and full of *grub-worms*, now just ploughed and subsoiled—a fine velvety lawn required. Very truly yours.

A SUBSCRIBER.

P. S. If the above grasses are, in your opinion, desirable, do you think they can be had at our nurseries? Loudon says the best place is at *Cormack's Nursery*, in New Cross, London. In Boston, I could not find that our nurserymen knew any thing of the Fescue or Crested Dog's-tail Grass.

REMARKS.—The grasses referred to by our correspondent, are favorite lawn grasses in England. We have seen them tested in two cases only in this country—both on very light, dry, sandy soils; and in these they did not prove to have greater power of resisting the drouth than the Red Top and White Clover. They were not, however, deep or trenched soils, and we should consider them, especially the Crested Dog's-tail Grass, worthy of a further trial here, with that advantage.

"Common Meadow Grass," *Poa pratensis*, is also a native of this country, and is well known at the West as the "*Kentucky Blue Grass*." It is said to make a fine lawn in light, rich, deep soils.* The Hard Fescue Grass and Sweet Vernal Grass are also natives of this country.

We would recommend a trial of a mixture of Crested Dog's-tail Grass, Kentucky Blue, or Common Meadow Grass, and White Clover, for the light sandy soil in question.

The *grub*, of which our correspondent

complains loudly, is easily destroyed by the application of salt, at the rate of six bushels to the acre. Let the land be stirred, and one half applied now, and repeat the same process in the spring, and this insect will disappear, and the soil will be greatly benefited for the growth of grass.

There is no danger of making a light soil too deep. But if the subsoil is meagre and poor—gravel, for instance, use the subsoil plow to *deepen* and *stir* it thoroughly rather than *reverse* the soil and subsoil much by trenching. The deeper the soil, the deeper the roots will extend, and the less susceptible will they be to surface drouths. A moderate annual top-dressing of salt—say three bushels to the acre, will improve *wiry* lawns, on light soils, more than any other application. The salt not only acts as a manure, but gives the soil *greater capacity for attracting and retaining moisture*. Next to this we must repeat our recommendation of the very frequent use of the *roller*.—
Ed.

Salt Cures the Diseases of the Plum.

BY DR. S. A. SHURTLEFF, BOSTON.

DEAR SIR—On looking over your valuable periodical, I discover my name referred to by Mr. J. M. IVES of Salem, and also by the editor, in connection with the application of salt to the Plum tree. As this is a subject interesting to all cultivators of fruit, I beg leave to offer you some few notes of my experience relating to it.

In 1839, my plum trees were covered with the black fungus, commonly known as

the *black knot or wart*. At the same time they cast their fruit, so that I did not get specimens enough to decide the genuineness of the kinds. Observing in several gardens that had been made on salt marshes, that the plum trees, in every case, were unusually vigorous and healthy; that they produced full crops, and did not cast their fruit; I was led to the conclusion that salt was a preventive of the disease, and that it also destroyed the curculio.

The next winter I gave each of my plum trees a dressing of about two quarts of salt. I directed my man to put it

* Seed of this grass may be had at Allen's Agricultural Warehouse, New-York. As there is little demand for the other lawn grasses, they are rarely to be found at the shops of our seedsmen, but may be ordered through them of CHARLWOOD, or any of the leading English dealers in seeds.

on in a circle, about twelve inches from the tree. [We presume, meaning that the circle of salt did not come nearer the trunk than twelve inches.—ED.] It being salt that was the residuum of a pork barrel, I cautioned him not to put on the brine. He did, however, put about a gallon around one tree, and it killed it. The others blossomed well, and the fruit remained on the trees until fully ripe. In the spring I cut off all the fungi or warts, but put nothing on. The wounds healed up nicely, and from that time, I have been in the habit of putting on salt annually; and the only trouble now is, that my trees bear too much fruit, so as to destroy its fine quality, unless a portion is thinned out.

In 1840, I set out some trees, quite covered with the fungus or warts. I treated them in the same manner as just described, cutting the trees deeply wherever any disease was found, and the next year the wounds were all healed, and no excrescences have since appeared.

Last winter I omitted the application of salt. I have no fungus, but the fruit was more diseased than usual. The ensuing winter I shall therefore apply it again, as I am fully convinced that it is, if properly and

judiciously used, a sure preventive of both the fungus and the curculio. I have examined the fungus, and in most instances, found a small grub or larva. Whether the disease was produced by the insect, or the insect resulted from the disease, (the warts in a young and tender state, affording the best place to deposit its eggs,) I will not undertake to say; but if salt will enable us to prevent the disease, I think it is certainly a great boon to fruit-growers. Most fruit-growers like myself will probably be content to prevent disease, even if they are unable to look into all the secrets of nature, and understand its origin.

I have raised from seed several kinds of plums, one of which appears to me superior to any variety that I have ever eaten. It is about the size of the *Lombard*, a free stone, of a lilac color, melting, saccharine. The stone itself is about the size of that of the *Bigarreau* cherry stone; the tree with me is not subject to any disease, and bears admirably every year. It is very luxuriant, growing some years from six to eight feet. I consider it a great acquisition to any collection of plums.

S. A. SHURTLEFF, M. D.

Spring Grove, Brookline, near Boston, Oct. 31, 1846.

THE STRAWBERRY CONTROVERSY.

BY HENRY WARD BEECHER, INDIANAPOLIS, IA.

[THE following very able article we reprint from a late number of the *Western Farmer and Gardener*, at the request of several of our subscribers.

Mr. HOVEY, whose course in relation to this subject is so ably handled by this writer, is the editor of a gardening magazine, published for some time in Boston. In that periodical, he attacks, from time to time,

the opinions of those who differ from him, with an arrogance and presumption, which would scarcely be pardonable in writers of the world-wide reputation of LINDLEY or LOUDON.

In the editor of a magazine, having the circulation of a few hundreds only, and who is only known to the public generally as the originator of a large strawberry, such a course

is only amusing. We have not, ourselves, supposed his remarks in any way worthy of serious attention, but since Mr. BEECHER, who is probably ignorant how little Mr. H. represents the views of any portion of the horticultural public, has chosen to look upon his opinions in a graver light, and has manfully defended Mr. LONGWORTH, we willingly give his remarks a wider circulation.—ED.]

.....

No man will deny, that in their cultivated state, strawberries are found, in respect to their blossoms, in three conditions: first, blossoms with stamens alone, the pistillate organs being mere rudiments; second, blossoms with pistillate organs developed fully, but the stamens very imperfect and inefficient; third, blossoms in which staminate and pistillate organs are both about equally developed.

There are two questions arising on this state of facts; one a question of mere vegetable physiology, viz., Is such a state of organization peculiar to this plant originally, or is it induced by cultivation? The other question is one of eminent practical importance, viz., What effect has this state or organization upon the success of cultivation?

Passing by the first question, for the present, we would say of the second that a *substantial* agreement has, at length, been obtained. It is on all hands conceded that staminate plants, or those possessing only stamens, and not pistillate organs, are unfruitful. Any other opinion would now be regarded as an absurdity. It is equally well understood, that pistillate plants, or those in which the female organs are fully, and the male organs scarcely at all, developed, are unfruitful. No one would attempt to breed a herd of cattle from males *exclusively*, or from *females*; and, for precisely the same reason, strawberries cannot be had from plants substantially male, or substantially female, where each are kept to themselves.

But a difference yet exists among cultivators, as to the facts respecting those blossoms which contain *both* male and female

organs, or, as they are called, *perfect* flowering plants.

Mr. LONGWORTH states, if we understand him, substantially, that perfect flowering varieties will bear but moderate crops, and usually of small fruit.

On the other hand, Dr. BRINKLE, whose seedling strawberries, we noticed in the last number, Mr. DOWNING, and several other eminent cultivators, adopt the contrary opinion, that, *with care*, large crops of large fruit may be obtained from perfect flowering plants. The question is yet, then, to be settled.

It is ardently to be hoped that, hereafter, we shall have less premature and positive assertion, upon unripe observations, than has characterized the early stages of this controversy. We will take the liberty of following Mr. HOVEY in his Magazine, between the years 1842 and 1846, not for any pleasure that we have in the singular vicissitudes of opinion chronicled there, but because an eminent cultivator, writer, and editor of, hitherto, the only horticultural magazine in our country, has such influence and authority in forming the morals and customs of the kingdom of horticulture, that every free subject of this beautiful realm, is interested to have its chief men of such accuracy, that it will not be dangerous to take their statements.

In 1842, Mr. LONGWORTH communicated an article on the fertile and sterile characters of several varieties of strawberries, for Mr. HOVEY's Magazine, which Mr. H., for subject matter, endorsed. In the November number, Mr. CORR substantially advocated the sentiments of Mr. L.; and the editor, remarking upon Mr. CORR's article, recognized distinctly the existence of male and female plants.

He, Mr. H., says, that of four kinds mentioned by Mr. C. as unfruitful, two were so "*from the want of staminate or male plants*," and "*the cause of the barrenness is thus easily explained.*" And he goes on to explain divers cases upon this hypothesis; and still more resolutely he says, that all wild strawberries have not perfect flowers; "*in a dozen or two plants which we examined last spring, some were perfect*, (the italics are ours,) having both stamens and pistils;

others only pistils, and others only stamens; thus showing that the defect mentioned by Mr. LONGWORTH *exists in the original species.*" He closes by urging cultivators to set rows of Early Virginia, among the beds for the sake of impregnating the rest.

Mr. HOVEY's next formal notice was exactly one year from the foregoing, November, 1843, and it appears thus: "We believe it is now the generally received opinion of *all intelligent cultivators*, (italics are ours again,) that there is *no necessity of making any distinction in regard to the sexual character of the plants when forming new beds.* The idea of male and female plants, first originated, we believe, by Mr. LONGWORTH of Ohio, is now considered *as exploded.*" Such a sudden change as this was brought about, he says, by additional information received during that year, by means of his correspondents, and by more experience on his own part. He says nothing of male blossoms and female blossoms, *which he had himself seen in wild strawberries.* Mr. HOVEY then assumed the theory, that *cultivation*, good or bad, is the cause of fertile or infertile beds of strawberries, and he says "in conclusion, we think we may safely aver, that there is not the least necessity of cultivating *any one strawberry near another*, (our italics,) to ensure the fertility of the plants, *provided* they are under a proper state of cultivation."

Mr. HOVEY now instituted experiments, which he promised to publish, by which to bring the matter to the only true test; and he, from time to time, repromised to give the result to the public, which, thus far, we believe he has forgotten to do.

His Magazine for 1844, opens as that of 1843 closed, and in the first number he says, "the oftener our attention is called to this subject, the more we feel confirmed in the opinion that the theory of Mr. LONGWORTH is entirely unfounded; that there is *no such thing as male and female plants*, though certain causes may produce, as we know they have, fertile and sterile ones."

Nevertheless, in the next issue but one, this peremptory language is again softened down, and doubt even appears, when he says, "If Mr. Longworth's theory should prove true," &c. We, among others, waited

anxiously for the promised experiments; but if published, we never saw them. The subject rather died out of his Magazine, until August, 1845, when, in speaking of the Boston Pine, a second fine seedling of his own raising, he is seen bearing away on the other tack, if not with *all* sails set, yet with enough to give the ship headway in the right direction. "Let the causes be what they may, it is sufficient for all practical purposes, to know that *the most abundant crops* (italics ours) can be produced by planting some sort abounding in *staminate* flowers, in the near vicinity of those which do not possess them." p. 293. And on p. 444, he reiterates the advice to plant near the staminate varieties. In the August number for 1846, p. 309, Mr. HOVEY shows himself a thorough convert to Mr. LONGWORTH's views, by endorsing, in the main, the report of the committee of the Cincinnati Horticultural Society. We hope, after so various a voyage, touching at so many points, that he will now abide steadfast in the truth.

We look upon this as a very grave matter—not because the strawberry question is of such paramount, although it is of no inconsiderable, importance; but it is of importance whether accredited scientific magazines should be trustworthy, whether writers or popular editors should be responsible for mistakes entirely unnecessary. We blame no man for vacillation, while yet in the process of investigation, nor for coming at the truth gradually, since this is the necessity of our condition to learn only by degrees, and by painful shiftings. The first requisite for a writer is, that he be worthy of trust in his statements. No man can be trusted, who ventures opinions upon uninvestigated matters; who states facts with assurance which he really has not ascertained; who evinces rashness, haste, carelessness, credulity, or fickleness in his judgments. The question of perfect or imperfect blossoms depends upon the simplest exercise of eyesight. It requires no measurements, no process of the laboratory, no minute dissections or nice calculations; it requires only that a man should see what he looks at.

When a boy, playing "how many fingers do I hold up," by dint of peeping from

under the bandage, we managed to make very clever guesses of how many lily fingers some roguish lassie was holding in tempting show before our bandaged eyes; but some folks are not half so lucky with both eyes wide open, and the stamens and pistils standing before them.

If such latitude is permitted to those who conduct the investigations peculiar to horticulture, who can confide in the publication of facts, observations or experiments? Of what use will be journals and magazines? They become like chronometers that will not keep time—like a compass that has lost its magnetic sensibility—like a guide who has lost his own way, and leads his followers through brake, and morass, and thicket, into interminable wanderings. Sometimes the consciousness of faults in ourselves, which should make us lenient towards others, only serves to produce irritable fault-finding. After a comparison of opinions and facts, through a space of five years, with the most distinguished cultivators, east and west, Mr. LONGWORTH is now universally admitted to have sustained himself in all the essential points which he first promulgated, not *discovered*, for he made no claim of that sort. The gardeners and the magazines of the east have, at length, adopted his practical views, after having stoutly, many of them, contested them.

It was, therefore, with unfeigned surprise, that we read Mr. HOVEY's latest remarks in the September number of his Magazine, in which, with some asperity, he roundly charges Mr. LONGWORTH with manifold errors, and treats him with a contempt, which would lead one, ignorant of the controversy, to suppose that Mr. HOVEY had never made a mistake, and that Mr. LONGWORTH had been particularly fertile of them. Thus, "Mr. Longworth's remarks abound in so many errors and inconsistencies, that we shall scarcely expect to notice all." "Another gross assertion," &c. Referring to another topic, he says, "This question, we therefore consider as satisfactorily settled, without discussing Mr. Longworth's conflicting views about male and female Keen."

This somewhat tragical comedy is now nearly played out, and we have spoken a word just before the fall of the curtain, be-

cause as chroniclers of events and critics of horticultural literature and learning, it seemed no less than our duty. We have highly appreciated Mr. HOVEY's various exertions for the promotion of the art and science of horticulture, nor will his manifest errors and short-comings in this particular instance, disincline us to receive from his pen whatever is good.

We hope that our remarks will not be construed as a defence of western men or western theories, but as a defence of the truth and of one who has truly expounded it, though in this case the theory and its defender happen to be of western origin. Whatever errors have crept into Mr. LONGWORTH's remarks should be faithfully expurgated, and perhaps it may be Mr. HOVEY's duty to perform the lustration. If so, courtesy would seem to require that it should be done with some consciousness that through this whole controversy, Mr. LONGWORTH is now admitted to have been right in all essential matters, and if in error at all, only in minor particulars; while Mr. HOVEY, in all the controversy, in respect to the plainest facts, has been changing from wrong to right, from right to wrong, and from wrong back to right again. We do not think that the admirable benefits which Mr. LONGWORTH has conferred upon the whole community, by urging the improved method of cultivating the strawberry, have been adequately appreciated. We still less like to see gratitude expressed in the shape of snarling gibes and petty cavils.

We will close these remarks by the correction of a matter which Mr. DOWNING states. While he assents to all the *practical* aspects of Mr. LONGWORTH's views, he dissents to some matters of fact and philosophy, and among others, to the fact that Hovey's seedling is *always* and *only* a pistillate plant. He thinks that originally it had *perfect* flowers, but that after bearing twice or thrice on the same roots, the plants degenerate, and become either pistillate or staminate. He says, "Hovey's seedling strawberry, at first, was a perfect sort in its flower, but at this moment, more than half the plants in this country have become pistillate."

Mr. HOVEY himself states the contrary,

on p. 112 of his Magazine for 1844. He denies that there are two kinds of blossoms to his seedling, and says, "the flowers are all of one kind, with both pistils and stamens, *but the latter quite short, and hidden under the receptacle.*" This is the common form of all the pistillate blossoms, and shows, in so far as Mr. HOVEY's observations are to be trusted, that at its starting point and home, Hovey's seedling was, as with us it now invariably is, so far as we have ever seen it, a pistillate plant.

POMOLOGICAL GOSSIP.

EVERY body knows—we mean every body that knows the difference between pears and pippins—that Boston is the focus or centre of what may be called the *pear-mania*. At the annual shows of the Horticultural Society there, between *two and three hundred varieties* of this fruit are exhibited—a larger number by one-half, than are ever seen at the great shows of London, Paris, or Ghent.

It is the ambition of every fruit-grower in the circle of ten miles about Boston, to possess all the newest pears. Every little cottage garden has its Bartlett and its Beurrés; and many amateurs annually import from France, Belgium and England, the last novelty of the nurserymen's catalogues, at prices where *guineas* count as frequently as *shillings*.

Boston has thus the credit of first introducing to this country many fine varieties of fruit at a much earlier date than they would otherwise have reached us. This precedence which she holds over New-York and other cities, is not owing to any superiority of climate and soil; for it is admitted that she is not remarkably fortunate in these respects; but to the taste, wealth, enterprise, and above all the rivalry, joined to the power of union, which exists among her citizens. In Boston, the intelligence and spirit of the citizens, always act *combinedly*, and thus effect much—witness her Horticultural Society. In New-York they always act *individually*, and thus effect little—example the "Farmer's Club!"

Now that such a vast collection of pears has been accumulated in the country, we naturally look to the Boston cultivators, as having most thoroughly and repeatedly tested them, for *some results*. Every year the tables at the HORTICULTURAL HALL groan under vast contributions of pears; but the thousands of uninitiated visitors are, besides what may be gained by feasting the eyes, not much the wiser. *What are the results? What are really the best sorts?*

These are the questions which the planting community are now beginning eagerly to ask; and they are queries, which we hope the Society in question is making preparation to answer in its future great annual shows, by *labelling* conspicuously, "*FIRST QUALITY,*" all those varieties which the fruit committee, composed as it should be of the soundest pomologists in Massachusetts, shall decide to be worthy of that distinction.

In the mean time, it has occurred to us, that a beginning might be made, towards some general results in pomology, by opinions gathered from various parts of the country, and laid before the readers of this journal. It is only by a large contribution of facts and results, from practical men, that we can ever hope to attain any thing like a generalization of our knowledge on this subject.

Such thoughts as these passing through our mind, when we made a brief visit to Boston in September last, we had the curiosity to ask half a dozen of the most zealous

and experienced growers of the pear in that neighborhood, to commence the compendium of results, by answering the simple question "*which do you consider the three best pears—early, middle, and late—supposing yourself confined to three trees?*"

We passed our first night under the hospitable roof of the President of the Society, at *Hawthorn Grove*. Col. WILDER remarked that the question was difficult to answer, *because it was so simple*. He and many others have been, for years past, collecting and proving hundreds of sorts from all countries, and they had been so busily employed in testing, that little had yet been done in forming a *summary* of their experience. He frankly coincided with us in the opinion, that among the *hundreds* of sorts, with high sounding names, received from abroad, the really good ones could easily be counted by *tens*.

Col. WILDER has fruited this season over two hundred varieties of pears in his experimental grounds. He answered our question by naming the *Bartlett*, *Vicar of Winkfield*, and *Beurré d'Arenberg*.

On our expressing our surprise, that he should include the *Vicar of Winkfield* among so small a collection as three trees, he remarked that his high opinion of this variety was based upon a thorough trial of its good qualities, which were these—regular and great productiveness, never blowing off the tree, large, fair, unblemished fruit, and its remaining a long time in use. "True," he added, "the fruit is only second rate, but while it is of fair quality for the table, it is excellent for a long time for cooking." Altogether he considered it a fruit not to be dispensed with, in even so small a selection.

Mr. WALKER, the worthy chairman of the Society's committee on fruits, we unfortunately did not see, but we learn that his

opinion as to the three varieties coincides with Col. WILDER's.

Our next visit was to Mr. OTIS JOHNSON, at Lynn. We can scarcely convey to our readers our sensations of delight, at the extraordinary perfection of this gentleman's *fruit-garden*. He is one of the most zealous and untiring amateurs, and we have, nowhere in America, seen a garden devoted mainly, as this is, to fruit trees, in higher order, and the trees themselves more perfectly managed. The pears are mostly dwarfs, many of them being trained in pyramid or in *quenouille* form, and all in the most healthy and satisfactory condition. We quickly saw that the knowledge of sound principles of culture here evinced, would produce results highly satisfactory in almost any soil or climate, however unfavorable naturally.

Mr. JOHNSON's answer to our question was, "*Bartlett*, *Louise Bonne de Jersey*, *Beurré d'Arenberg*." "The *Louise Bonne de Jersey*," he said, "is the most productive upon young trees of any pear I cultivate; and I think if I could have but three, I would be forced to include it; yet I may alter my opinion when the trees become older."

The persons we were next most desirous of questioning for results, were the cultivators at Salem, one of the surroundings of Boston most famous for its horticultural success.

At the *Pomological Garden*, the quiet and unpretending homestead of our late friend, that excellent pomologist ROBERT MANNING, we found every thing in excellent order, under the care of his sons. The elder son, Mr. R. MANNING, after some gardening chat, desired us to look among the numerous specimen trees in bearing, which we did with satisfaction. His answer to our inquiry was the following, "*Bartlett*, *Beurré Bosc*, and *Winter Nelis*." *Beurré Bosc*, Mr. MANNING could not but consider, on the

whole, one of the very best of autumn pears.

Our correspondent, Mr. IVES, whose garden joins Mr. MANNING'S, and whose zeal and enthusiasm as a cultivator are well known, favored us also with his three select favorites, which are these—*Bartlett*, *Fondante d'Automne*, and *Winter Nelis*. "You may be assured," said Mr. IVES, "that no autumn pear surpasses the *Fondante d'Automne*;" whereupon he placed in our hands a fine specimen of this luscious fruit, to stop our mouth and our objections at the same moment. It was, as, indeed, we have always found this variety, truly delicious.

Our last pomological visit was to Mr. JOHN C. LEE of Salem. It was three years since we had visited his grounds, where we have always found a great deal that is interesting and instructive. We were now greatly pleased with the admirable management every where to be seen, the stock of new trees and plants imported from abroad, and the flourishing and healthy condition of all. The buckthorn hedges here, are perhaps the most perfect in the country, and particularly pleased us by the manner in which they were trimmed—in the shape of a perfect triangle or wedge, whose base was about four feet, and height about seven or eight feet.

Mr. LEE has tested a great many fine pears, but hesitated when called upon to decide at once upon *three*. He finally chose, as the three which his own experience would lead him to adopt—the *Bloodgood*, *Seckel*, and *Winter Nelis*.

There were several other gentlemen, experienced fruit-growers, about Boston, to whom we should have been glad to submit our *primary question*, but our limited time did not allow us to visit them.

Something, however, has, we think, been gained by our pomological gossip. We have at least ascertained for our readers *nine pears*, whose maturity is from early summer to winter, which are esteemed by the most experienced growers of this fruit about Boston, as the very best for that neighborhood, and we may add, for the whole sea-coast belt, of fifty miles broad, extending from Chesapeake bay to Maine. These are *Bloodgood*, *Bartlett*, *Louise Bonne de Jersey*, *Seckel*, *Fondante d'Automne*, *Beurré Bosc*, *Vicar of Winkfield*, *Winter Nelis*, and *Beurré d'Arenberg*.

The *Bartlett*, it will be perceived, is almost an universal favorite. This is owing not simply to its size and good quality, but also to its regular productiveness, joined to its invaluable habit of adapting itself to every soil, and bearing while the tree is yet very young. *Beurré d'Arenberg* and *Winter Nelis* are about equally popular as winter fruits—the former being the best bearer, and the latter the most luscious in flavor.

Some of our readers may expect that after having successfully solicited the contributions of the leading devotees of Pomona around Boston, we are bound to contribute something ourselves before closing the books.

We shall do this very willingly, if they will allow us what speculators call a *large margin*. We must beg to be allowed *two* answers, though we would not allow our respondents but one.

For all gardens to the east and south of us, we would recommend *Bartlett*, *Seckel*, and *Beurré d'Arenberg*. For all gardens to the north and west, *Bartlett*, *White Doyenne* and *Beurré d'Arenberg*.

ROOT GRAFTING.

BY F. K. PHENIX, DELAVAN, WISCONSIN.

I HAVE never seen in any eastern publication, what I consider by any means a full and accurate description of the best method of root grafting. And as this is now, so far as I know, decidedly the most popular method of propagating fruit trees, and in many respects as decidedly the best, it seems to me that too great pains cannot be taken to ascertain and establish the best mode of performing the operation. Root grafting is very applicable to apples, pears and plums—and I think is much the easiest way to work apples and plums; pears bud so easily that with any pear stocks, save seedlings, I should prefer budding. Seedling pear stocks I have never tried by grafting in the root and boxing as with apples, but I see no reason why they might not be used to as good advantage in that way as are apple roots—by grafting in which, as is well known, a great saving in stocks is effected. The following remarks apply particularly to the apple, as I have never tried grafting the plum or pear on their own roots, (though I have the pear several times upon apple roots,) in the winter and boxing them—but I have often root grafted them in the spring, and with the best success.

The roots for grafting must of course be secured in the fall, and should be fine, thrifty seedlings of at least two years growth, though *our* yearlings, which sometimes have roots nearly one-half an inch thick, make as fine trees as I ever saw. In preparing the roots for packing I always cut off the tops about six inches from the roots, in order to save room, and for convenience in handling them when grafting. The roots are packed in tight boxes in thick layers with moist earth amongst them, and be-

tween the layers; the boxes I keep in my cellar. The boxes for packing away the roots when grafted, I have 24 inches long, 12 wide and $5\frac{1}{2}$ high on the inside, which need not be very tight, and will hold from 6 to 1200, according to the size of the roots and the closeness with which they are packed. When ready to commence operations, I take a quantity of the roots, as many as are wanted during the day, and after trimming off all the side roots quite close to the main root, say within $\frac{1}{4}$ th or $\frac{1}{3}$ th of an inch, I proceed to cut them up in pieces from 3 to 4 inches in length—never longer, marking the upper ends of the roots if necessary, in order to distinguish them when cut up, and throwing the pieces into a pail of water. If desirable to cut very close, the upper piece need not have more than one inch of clear root upon it. In regard to size—I have often been obliged to use roots not larger than a pipe stem, and where they were thrifty and perfectly sound, and set out under favorable circumstances, they have done well, still I greatly prefer larger. When the roots are cut, they are then washed by stirring and turning them a few minutes in the pail and changing the water once—leaving them, when washed, in the water. I then take my scions, and after marking the name of the variety upon a little stake 8 or 9 inches long, (which I keep with them constantly, and in boxing put between the kinds,) I cut and prepare 2 or 300 grafts ready for setting and pile them up. The grafts I have from $3\frac{1}{2}$ to $4\frac{1}{2}$ inches in length, and with a tongue as in splice grafting. The cut or slant at the lower end of the graft, on which the tongue is made, should not with common sized scions, exceed about

half an inch in length for various reasons; nor should it on the root. When the grafts are prepared, the roots are taken from the water, and piled up with the upper ends all towards you. The roots, one by one, as I set them, are thus prepared with a tongue, and the grafts inserted. They are then spread out, so that the outside moisture may dry off in order to have the grafting wax adhere. This is made by melting and stirring together four parts rosin, one and a half beeswax, and one of tallow. I put it on warm, or while in a fluid state, and with a shaving brush, which is very neatly, quickly and safely done. It is not by any means necessary to have it perfectly tight—a little put on the side where the bark of the root and scion meet, and on the root where cut, is all that is requisite. Many, if not most of those who graft in the root, use waxed strips of cloth or paper, and some tie with strings, *using no wax*, but these in my experience are tedious and perfectly unnecessary operations. Last spring I set over 20,000 in the way I speak of, and with excellent success—indeed I have sometimes, when planting out from the boxes, taken out 500 without finding a single graft that had failed. After being waxed, the roots are ready for boxing. The box is first partly filled with fine earth, some of which is packed up against one end; I then take up some of the roots, and even the tops of a handful in my hand, and set them up slanting against the earth, beginning at the right hand side of the box, with the tops about two inches above it. In order to get the tops even and keep the tiers separate across the box, I use a thin, narrow strip of board, which reaches over the box and is placed behind every fresh tier whilst putting it in—and also a little punch to jam the earth down firm behind each tier and next to the box. After placing the row, the

dirt should be worked amongst the roots and packed *snugly* against them. There need be no fear of disjoining them, unless they are handled very roughly. When the box is full, it is set away in a cool cellar, where the mice cannot get at it.

In regard to their freezing, whilst thus boxed up, I have had no experience, but I have it from a first rate nurseryman who has tried the experiment several times, that it does not injure them in the least, even if they freeze and thaw out two or three times during the winter—that is, if they are well boxed. I do not think I should like to have them frozen after they had started to grow much, nor should I care about risking it any way if it could well be avoided. When the boxes are exposed to the heat and light, and supplied with water, the shoots put out exceedingly rapid, and hence they should not be thus exposed till about two weeks before setting, otherwise they will grow so long and weak that it will shock them severely when planted out. They should be set as early in the spring as the ground will admit—though I have known them set as late as the middle of May, and with shoots from six to eight inches in length, but not with the best success by any means. I prefer, however, for several reasons, to have the shoots two or three inches in length when planted out. They should be set in good mellow soil, and with the top of the scion an inch or two above the ground. The sprouts from the roots should all be taken off when they are set.

I have grafted in the above manner for several years, and I believe with as good success as could be expected. I find, according to my books, (in which I keep regular lists of the varieties grafted each year, with the number set, and also the number of each kind alive in the fall,) of one vari-

ety 137 set, and 124 lived; another, 204 and 190; 173, 165; 103, 102; this, to be sure, is better than the average, though no better than that would have been under favorable circumstances, but we out-westerners have to use such stocks as we can get. Root grafting in this way can be done at any time after cold weather sets in, though I do not like to commence before January, and should prefer waiting still longer or till February, if convenient, as it is rather diffi-

cult to keep them from starting too early, if done so long before spring. Should there be any roots or scions prepared that are not used the same day, they can be kept perfectly well in water over night, or even two or three days, if necessary. The regular days work grafting, as above, is 500, and it is not a hard task, after a little practice, where the tools and materials are good. Very respectfully yours, &c.

Delavan, Wis., Nov. 16, 1846.

F. K. PHENIX.

REVIEW.

A BRIEF COMPEND OF AMERICAN AGRICULTURE.

By R. L. ALLEN. New-York, Saxton & Miles.
Buffalo, T. & M. Butler. 12mo. pp. 437—\$1.

It is really a great satisfaction to get hold of an American treatise on Agriculture, that has a plain, practical, common sense character of *its own*. So many mere patchers and compilers are there, who, without any practical knowledge of their own, use their scissors shamelessly upon the productions of English authors, thus readily making *books* without taxing their own poor brains, books too, that are really of no value in this climate and country—books that only serve to puzzle and bewilder the farming novice—that, we repeat, it is with unusual satisfaction we have opened this new, compact duodecimo volume.

Mr. R. L. ALLEN, of Buffalo, the author of this work, is already known to the agricultural public as a thorough practical farmer and stock breeder. That he well knows what he is about on a farm, these pages abundantly show. No mere book-maker could have written such a book; and we may add, also, that no mere practical farmer could have written it. A "good practical work" can only be written by a man who has both thought and acted well.

What distinguishes this volume, is its conciseness, its clearness, and its perspicuous treatment of the subject in hand. The reason why most agricultural works are prolix and heavy, is because their authors had not made the subject thoroughly their own. No man can write clearly and plainly about what he possesses only indistinct and confused notions himself. And no man can have clear and distinct ideas, regarding any practical subject like agriculture, however conversant he may be with *Stephens' Book of the Farm, Loudon's Encyclopedia or Von Thaer's Principles*, unless he is able to digest all the more valuable theories contained in these works *in his every day practice*. Otherwise it is only like Calvin Edson, the walking skeleton, dining on roast beef and plum pudding.

What American farmers want, as we conceive, at the present moment, are plain and sensible reasons for our *best* agricultural practice *as it is*, and equally common-sense hints and directions *for its improvement*. Books written upon such a plan, by competent men, will go a thousand times farther toward making good husbandmen, and improving those already skilful, than a republication of all the elaborate English. French

or German systems of draining, subsoiling, and irrigating, that the best authors of the other side of the Atlantic have yet produced.

It is idle to lay before farmers, in a country like ours, where *capital* is rarely or never employed in farming—where land is plentiful, but labor scarce and dear—systems of farming, based on just the contrary state of things—where farming is carried on with abundant capital, and where the price of labor and the means of tillage are such that it will pay a good interest upon the capital employed. It is very much like discoursing to the keeper of a “country store,” upon the large principles of commerce which govern the transactions of such houses as the Barings, or Brown, Brothers, and Co.

We think, therefore, that Mr. ALLEN's volume, the basis of which is good practical farming, as practised by the best cultivators in the United States—with an intelligent reference to those principles of science which lie at the root of all successful practice, is likely to be of as much or more real service to us, than any work on agriculture yet issued from the press, and we gladly commend it to the perusal of every one of our readers engaged in the cultivation of land.

Its character, indeed, is essentially that of a manual, or *handbook*. “It is intended,” says the preface, “as one of the first in the series of lessons for the American farmer. Its size precludes its embracing any thing beyond the shortest summary of the principles and practice by which he should be guided in the honorable career he has selected. As a primary work, it is not desirable that it should comprise so much as to alarm the tyro in agriculture with the magnitude of his subject. A concise and popular exposition of the principal topics to which his attention will necessarily be directed,

will, it is believed, in connection with his own observation and practice, give him a taste for further research, which will lead him to the fullest attainment in agricultural knowledge, that could be expected from his capacity and opportunities.”

This is a very modest introduction to a work, which, if only “a brief compend,” contains less speculation, and more pith and sense, than one in a hundred of the volumes now being offered on the cultivation of the soil.

The work is by no means local in its character, as it is quite copious and instructive on the subject of southern agriculture, and we cannot doubt will be very acceptable south of the Potomac.

We would gladly give space for some extracts from the body of the volume, but our limits will not permit. We cannot, however, but quote from the introduction, Mr. ALLEN's excellent remarks on the propriety of the exercise, by the State Legislature, of a fostering care of the interests of Agriculture. The *people*, Mr. ALLEN urges with force, should oblige the state legislatures to effect something more tangible for the education and advancement of farmers as a class—we may add, the *great respectable* class of America.

“Education, in all its branches, is under their exclusive control; and to endow and foster every institution which has a tendency to raise and improve the intellectual, the moral, and the social condition of the people, has ever been their cherished policy. Yet up to this time, no institution expressly designed for the professional education of farmers, has ever been established in this country. That far-seeing wisdom which characterizes the consummate statesman, which regards the future equally with the present and past, has halted upon the threshold of the great temple of agricultural science, whose ample and enduring foundations have been commenced by the united efforts of the men of genius throughout both hemispheres. To aid with every means in their power, in laying these foundations broad and deep, to elevate its superstructure, to rear its mighty columns, and adorn its graceful capitals, would seem most properly to come within the province of the representatives of

intelligent freemen, the great business of whose lives is the practice of agriculture.

"In addition to continuing and making more general and comprehensive the encouragement for other objects heretofore considered, it is the duty of each of the larger states of the Union, liberally to endow and organize an Agricultural College, and insure its successful operation within its jurisdiction. Connected with them, should be example and experimental farms, where the suggestions of science should be amply tested, and carried out before submitting them to the public. The most competent men at home and abroad should be invited to fill its professional chairs, and if money would tempt a Liebig, a Boussingault, a Johnston, or a Playfair, to leave the investigations of European soils and products, and devote all their mind and energies to the development of American husbandry, it should be freely given.

"These institutions should be schools for the teachers equally with the taught, and their liberally appointed laboratories and collections should contain every available means for the discovery of what is yet hidden, as well as for the further development of what is already partially known. Minor in-

stitutions should of course be established at different and remote points, to scatter the elements of agricultural knowledge broadcast throughout the land, and bring them within the reach of the poorest citizens and the humblest capacities.

"By such a liberal and enlightened course, we should not only incalculably augment the productive agricultural energies of our own country, but we should also in part repay to the world at large the obligations under which we now rest for having appropriated numerous and important discoveries and improvements from abroad. If we have the ability, which none can doubt, we should make it a point of honor to return in kind the liberal advances we have thus received.

"It is to the rising generation these suggestions are made; the risen are not yet prepared for their acceptance. The latter have been educated and become habituated to different and more partial influences. By their industry, intelligence, and energy, displayed in numberless ways, and especially by their protection of American labor, they have accomplished much for their own and their country's welfare—they are resolved to leave this glory for their successors."

FOREIGN NOTICES.

THE DERBY ARBORETUM.—The attraction to Derby was the public garden planted as an Arboretum, where it is proposed to grow a specimen of every species of tree and shrub that will bear the climate. It was planned by JOSEPH STRUTT, Esq. a wealthy silk manufacturer, and a member of parliament, as a gift to his townsmen. It is certainly one of the noblest donations, for its beauty and utility, ever made by an individual for the benefit of a community in perpetuity.

There are eleven acres, laid out in such a manner as to give an idea of much greater extent; the walks being excavated, and the earth thus obtained being carried up gradually sloping ridges well planted, the adjoining path is not visible; you may thus be within twenty feet of a large party without being aware of their presence. The circuit is thus much extended, compared with what it would have been, had not this device been adopted; the boundaries are hidden by shrubbery, and the best modern hints on landscape gardening have all been adopted by Mr. LOUDON. When the trees, which are now small, have had time to grow, the Derby Arboretum will contain such a variety as to be one of the most attractive spots to the botanist in Europe. They are never to be allowed to attain great height or size, the object of the institution being to assemble as great a variety as possible, for the purpose of instruction. To this end every tree and shrub is labelled with its appropriate botanical and common name, in the following manner:

A cast-iron rod, with a square top indented so as to receive a glass covering, is inserted in the ground at the foot of each plant; the names are

conspicuously painted, and the glass glazed in, thus those who run may read. The benevolent founder, whose bequest amounted to fifty thousand dollars, land, buildings, and improvements included, intended it as a place of recreation for all classes, including the working population, who are admitted gratuitously five days in the week including Sunday after Church service; on the other two days, the fee of admission is sixpence, for the purpose of keeping the place in order, for repairs, etc. The beautiful lodges at two entrances are so arranged that comfortable rooms for visitors are attached, where pic-nic parties may bring their eatables, and obtain the use of plates, knives and forks, for the smallest fee; tea, coffee, and cakes are sold at prices barely covering the cost.

"So far the whole affair has worked well for the pleasure and improvement of the middle and poorer classes, who enjoy the recreation afforded, and have proved themselves worthy of the trust reposed in them; many have taken to the study of Arboriculture; books for reference, such as those invaluable ones of LOUDON'S, are kept for the use of visitors without any charge or fee whatever.

Mr. STRUTT'S arrangements contemplated a little further recreation on week days; handsome tents are provided for such visitors as desire to have a rural fête champêtre; to these, under proper regulations of the trustees, who are perpetually a committee of the town councils, a party may resort to dance, bringing a band, or to enjoy music.—*Smith's Juunt across the water.*

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ECONOMICAL VALUE OF THE GRASSES.—For economical purposes, grasses are often of much im-

portance. The strong stems of the Bamboo are employed instead of timber and cordage. The *Arundo arenaria* and *Elymus arenarius* (Marrum grasses) are invaluable species for keeping together the blowing sands of the sea-coast, by their creeping suckers and tough entangled roots. The first is employed in the Hebrides for many economical purposes, being made into ropes for various uses, mats for pack-saddles, bags, hats, etc. Some of the reeds of Brazil, called Taquarussa, are living fountains: they grow from thirty to forty feet high, with a diameter of six inches, from thorny, impenetrable thickets, and are exceedingly grateful to hunters; for, on cutting off such a reed below a joint, the stem of the younger shoots is found to be full of a cool liquid, which quenches the most burning thirst. Reeds and other coarse species furnish, in Europe, the materials for thatching. The reeds (sometimes sixteen feet long,) from which the Indians of Esmeralda form the tubes whence they blow the arrows poisoned with the deadly Urari or Woorali, are single internodes of the *Arudinaria schomburghii*. (Linn. Trans. xviii. p. 562.) A coarse but good sort of soft paper is manufactured in India from the tissue of the Bamboo, and the very young shoots of that plant are eaten like asparagus.

Besides these things, the inorganic products are remarkable. That the cuticle contains a large proportion of siliceous matter is proved by its hardness, and by masses of vitrified matter being found whenever a haystack or heap of corn is accidentally consumed by fire. In the joints of some grasses, a perfect siliceous deposit is found, particularly in a kind of Jungle grass mentioned in a letter from Dr. Moore to Dr. KENEDY of Edinburgh. It is also said that wheat straw may be melted into a colorless glass with the blow-pipe, without any addition. Barley straw melts into a glass of a topaz yellow color. The siliceous matter of the Bamboo is often secreted at the joints, where it forms a singular substance, called *tabasheer*, of which see a very interesting account in *Brewster's Journal*, viii. p. 268. It was found by Turner, that the *tabasheer* of India consisted of silica containing a minute quantity of lime and vegetable matter. Sulphur exists in combination with different bases, in wheat, barley, rye, oats, maize, millet, and rice. *Lindley's Vegetable Kingdom*.

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TRICKS IN ALL TRADES.—In 1823, the Duchess de Berri obtained from the rose plantations which she made every season at Rosni, twelve flowers which appeared to her of remarkable beauty. However, as the point was not only to have beautiful roses, but new and unknown ones, she ordered Madame de la Rochejaquelein to show them to a celebrated gardener. The gardener, having examined them about ten minutes, declared that three of them were new. One of them in particular appeared to merit a preference over its two rivals, and it received the appellation of the *Hybrid of Rosni*.

Two years after, in the month of May, 1830, the last season the Duchess de Berri was destined to see her roses in flower, she bethought herself that she had for two years enjoyed the pleasure of

possessing alone the *Hybrid of Rosni*, and that it was time to renew her pleasure by making others partake of it. She considered that it would be a present of value to the celebrated gardener, and she commissioned Madame de la Rochejaquelein to offer it to him for her. Madame de la Rochejaquelein found the horticulturist reading under the shade of two lofty rose trees, bending down with magnificent flowers. He received the offer with all the marks of gratitude which this honorable and delicate attention deserved. But the benefit arrived too late; he had contrived, during the short time the roses were in his hands, two years before, to cut off privately two buds of the finest variety; he had grafted them with the greatest success, and he had received the messenger of the Duchess under the shade of two *Hybrids of Rosni* far finer than any of those in the possession of Madame. *Gardener and Practical Florist*, Vol. 3, p. 54.

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A "SEEDY" LAWYER.—The Anemone grows naturally in the Levant, particularly in the islands of the Archipelago, where the borders of the fields are covered with them of all the colors, but the flowers are single, and have been greatly improved by culture. In France they were long cultivated before they were much known in Holland or England. Tournefort mentions two French gentlemen, Messrs. Malaval and Bachelier, who contributed greatly to the improvement of these flowers; and of the latter, he relates a pleasant story as follows:

There was a certain lawyer to whom M. Bachelier refused to communicate the seeds of his fine Anemones, who finding he could not obtain any either by friendship or money, determined to make a visit to M. Bachelier, with some of his friends who were in the secret; he ordered his lacquey who supported the train of his gown, to let it drop on a bed where the Anemones grew which he wanted, whose seeds were then ripe. They walked a considerable time, talking on various subjects, and when they came to the spot where the Anemones grew, a merry gentleman of the company began a story which engaged the attention of M. Bachelier, at which time the lacquey, who was no fool, let fall his master's train over the bed, and the seeds, having a downy covering, stuck to the gown, which the boy afterwards carefully raised, and the company went forward. The virtuoso took leave of M. Bachelier, and went directly home, where he carefully picked off the seeds which had stuck to his robes, and sowed them, which produced very beautiful flowers. *Gardener and Practical Florist*, Vol. 3, p. 266.

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PLANTING EVERGREENS.—After all that has been said about spring planting of evergreens, or even midwinter, I am persuaded that no part of the year can equal the autumn—say from the middle of October until the end of November. I have moved hundreds of large evergreens, at all periods within the last twenty years, and I have invariably realized the greatest amount of success by autumn planting. Much, however, depends on the character of the soil, as well as on the mode in which the operation is conducted. Some persons advo-

cate a puddle planting;" but on what principles I never could discover. Why not "puddle potting"? Certainly it is better to puddle a large specimen than to totally neglect it in regard to moisture. My practice is this: To open a hole much larger than the ball of earth or volume of roots about to be introduced, taking care not to make the hole any deeper in general than the surface-soil extends; then to saturate the subsoil with water, and next to pulverize the soil thoroughly, intended for filling in round the roots. After this is completed, I invariably rake together a body of tree-leaves (if at hand,) weeds, sticks, &c., and throw three or four inches (sometimes a foot,) in the bottom of the hole, to set the ball or roots on, putting little or no soil beneath the tree. The tree being carefully removed—not a fibre suffered to dry, if possible, during the operation—is placed on the leaves, and the process of filling up commences. I invariably mix decayed vegetable matter with the common soil; this is sometimes obtained on the spot by raking or paring the surface of the ground contiguous. The soil being in a mellow state, is slightly trod as the filling proceeds; and when filled level with the ball or rather above it, the whole receives a thorough watering, using several cans of water at slight intervals. The next business, and a most important affair, is to thoroughly stake the tree to prevent wind-waving. When this is completed, a thick mulching of half-rotten manure or leaves will finish the process. Such trees should have one thorough soaking of water in the early part of April; afterwards they may be safely left to themselves.—*Gard. Chron.*

ABIES DOUGLASSII.—The size and growth of the *Abies Douglasii* in the fine climate of Dropmore and Carlew, having been noticed, it may not be uninteresting to know how it has prospered in a comparatively ungenial climate, and at a height of 750 feet above the level of the sea. I have just had mine measured; the height is 40 feet, the circumference at two feet from the ground is 3 feet 6 inches, the length of some of the lower branches nearly 14 feet, and the circumference of the branches on the ground about 90 feet. It is thickly clothed with luxuriant branches from the ground to the top. It would certainly have been 5 or 6 feet higher, but from the misfortune of having twice lost its leading shoot; three years ago a shot from a gun pierced the leading shoot, and this year a severe hailstorm broke it down. In one respect I am more fortunate than Sir C. Lemon, at Carlew, for I have 50 fine young plants raised from the seed of last year, but which had a narrow escape from death by the same hailstorm that broke the leading shoot of their parent, and were only saved by the gardener rushing out with a hand glass; they would otherwise all have perished, along with other plants that were cut down in great numbers. I have two or three fine plants raised from layers, which seem to be putting out shoots on all sides, and growing well and upright. There are no cones upon the tree this year.—*William Ord. Gardener's Chronicle.*

A SPECIES OF AMERICAN ALOE IN FLOWER.—There is now in flower in the Botanical Garden of this University, a fine specimen of *Furcraea cubensis* or *Cuba Aloe*, raised from seed sent to the garden about 14 years ago, since which time it has been constantly kept in the stove. The first indication it gave of flowering was early in the month of August of the present year, and since that time the stem has made so rapid a growth as to have attained the height of 23 feet, and has produced 28 branches, which are again divided into many branchlets, on which are suspended about 1400 buds and blossoms; these are of a greenish-yellow color, and, when fully expanded, rather more than 2 inches in diameter, very fragrant; but, viewing each flower singly, by no means showy. Although this species was introduced into England so long ago as 1739, this is supposed to be the first time it has flowered in this country. *Furcraea gigantea*, a species very similar to the above, flowered in the autumn of 1820, in the garden of the Right Hon. Earl Powis, at his seat at Walcot, in Shropshire, and is figured in the "*Botanical Magazine*," v. 43, t. 2250. Another very fine plant of the same species has recently flowered in the Royal Botanic Garden at Kew.—*Oxford Herald, Oct. 17.*

BEET-ROOT A SUBSTITUTE FOR POTATOES.—Beet-root cannot be too much recommended as a cheap substitute for the Potato. Hitherto the red has only been used in England as a pickle, or as a garnish for salad; even the few who dress it generally boil it, by which process the rich saccharine juice is in a great measure lost, and the root consequently rendered less nutritious by the quantity of water which it imbibes, as well as by parting with the native syrup of which it is thus forcibly deprived; it is, therefore, strongly recommended to bake instead of boiling them, when they will be found to afford a delicious and wholesome food. This is not an untried novelty, for both red and white Beet-root are extensively used on the Continent; in Italy especially, they are carried about hot from the oven twice a day, and sold in the streets, giving to thousands, with bread, salt, pepper and butter, a satisfactory meal. There are few purposes, for which baked, or even roasted, or fried Beet-root would not be found preferable to boiled. If these roots were so universally cultivated in England for human food as they are on the Continent, and baked and sold as cheap, as they might easily be, many a poor person would have a hearty and good meal who is now often obliged to go without one.—*Torquay Directory.*

SUPERPHOSPHATE OF LIME.—When a small portion of superphosphate of lime is mixed with seeds when sown, in sufficient quantity to give them the appearance of being limed over, the seeds germinate quicker and stronger, more especially in the case of old seeds; and it is also found that the plants are less liable to damp off, or be injured by insects.—*Journal of Horticultural Society.*

DOMESTIC NOTICES.

BROWNE'S TREES OF AMERICA.—Mr. BROWNE has favored us with some remarks touching the review of his work in our October number. Our rather crowded columns this month do not allow us to print it entire, as we would willingly do.

He remarks, "I have observed several errors, probably caused by oversight, and one or two passages that would have a tendency to mislead the public."

Mr. BROWNE complains that Mr. LOUDON has often been a borrower from *his* first work on trees, the "Silva Americana;" and remarks that he has given credit to LOUDON in the body of the *Trees of America* "more than one hundred times." This is true, but it in no way affects our criticism, as the credit is given for particular passages, when whole pages are copied without credit.

"In justice to your readers," says Mr. BROWNE, "could you not with propriety have informed them, that there are, at least, fifty trees described in my work, which are not even mentioned by LOUDON?"

We are obliged to reply to this, that, after carefully comparing the two works again, we cannot find *five* species. If Mr. BROWNE will point them out, and name them, we will do him the justice to publish them to our readers.

The truth is this work has disappointed those who looked for something new and valuable on the subject of American forest and ornamental trees. To show that others share with us in this opinion, we quote the following criticism on the work, from the last number of *Silliman's Journal of Science and Art*. It bears the initials of GRAY, the professor of botany at Harvard University, and one of the authors of Torrey and Gray's *Flora*, certainly an authority of the highest rank on such subjects:

"Though we find no statement restricting the general title, '*Trees of America*,' we presume, on the whole, that those of the United States only are intended, which may be termed, *par excellence*, American, in the same way that the continental title is applied to our citizens abroad. What is meant by the '*foreign* trees of America,' is not so clear, since Mr. BROWNE has omitted many of the common hardy exotics cultivated among us, while he has given such as the *Pistachio nut*, the *Paraguay Tea*, the *Prunus avium* of Europe, (which stands in his book under the name of 'The Wild Cherry Tree,' to mislead the general reader,) the *Laurus nobilis*, or True Laurel, and lastly the *Camphor Tree*, which is surely 'foreign' enough. On the other hand, the greater part of our Thorns, our Wild Crab trees, the Southern Prickly Ash, two of our Rhododendrons, and a large portion of our commonest taller shrubs, are entirely unnoticed; not that shrubs do not fall within the range of the work; for the low Canadian Barberry, the *Æsculus macrostachya* and the *Ilex vomitoria*, etc., are given in full. Upon examination, we find the book closes abruptly with the Elm family; the Amentaceous and Coniferous trees, that is, our principal forest trees, being left to the contingency of another 'supplementary volume,' to be published or not, as circumstances may warrant; which

we suspect is not exactly according to the terms of subscription. We should not have remarked upon this, nor upon the singular notion of making the Oaks, Hickories and Pines, play a *supplementary* part to Oranges, Almonds, Pomegranates, Myrtles, Figs and Camphor trees, in a work on the 'trees of this country, more complete and extensive than had hitherto been published,' if there had been any indication upon the title page or cover, or even an explicit statement in the preface, that this is only the first volume of a work on our trees; and in itself incomplete. This is 'a trick of the trade,' for which, perhaps, the author himself is not directly responsible. That we do not consider Mr. BROWNE as high botanical authority will not be surprising, when it is seen that he describes the *Ohio Buckeye* as a variety of the common *Horse Chestnut*, the *Rhus glabra* as a variety of the *Rhus typhina*, the *Robinia hispida*, or *Bristly Locust*, as a variety of the *Pseudacacia*, or common Locust tree; states his confident belief that the *Choke Cherry* and the *Wild Black Cherry* (*Cerasus virginiana* and *C. serotina*) are one and the same species; confounds in the same way all our species of Ash under *Fraxinus americana*, and all our Elms, even the *Wahoo* and *Slippery Elm*, under *Ulmus americana*. Some of these mistakes are copied from Loudon; but an American writer on the trees of his own country, who professes to exercise his own judgment on these points, should have corrected such obvious errors, instead of adding to them. Some liberty is taken with the poetry as well as the botany. A part of those beautiful lines—

'Wise with the lore of centuries,
What tales, if there were tongues in trees,
Those giant oaks could tell,'—

are 'conveyed' to the Pittsfield Elm, without a sign to indicate the change. The fruit of *Cratægus spathulata* is said to be of 'the smallness of a grain of mustard seed,' (p. 274.) The venerable Hales is said to be the author of '*Vegetable Statistics*,' instead of *Vegetable Statics*. Mr. Browne, following Michaux, says, 'The wood of *Olea americana* is excessively hard and difficult to cut and split: hence the provincial name of *Devilwood*,' (p. 382.) An insufficient reason, one would think, for the bestowal of such an ungracious cognomen. We have heard a better and more probable explanation, viz., that the wood in burning snaps loudly, throwing the fragments explosively from the hearth. We should like to know our author's authority for the following curious statement respecting the sassafras tree. 'The most interesting historical recollection connected with the tree is, that it may be said to have led to the discovery of America, as it was its strong fragrance, smelt by Columbus, that encouraged him to persevere when his crew were in a state of mutiny, and enabled him to convince them that land was not far off,' (p. 417.) Acute olfactories the great navigator must have had, to snuff the fragrance of Sassafras groves in Florida, more than five hundred miles off! Besides, now-a-days, the flowers of Sassafras

are almost scentless. With the greatest propriety does the author say, that he feels called upon to acknowledge that he is particularly indebted to Mr. London, *for a large share of his work*, taken from the *Arboretum Britannicum*, and to Dr. Thaddeus W. Harris, for many valuable extracts from his Report on the Insects of Massachusetts injurious to vegetation. From the latter, copious abstracts of the highest interest have been very freely taken; indeed, nowhere beyond Dr. Harris's own volume, will so large an amount of his invaluable researches be found embodied as in Mr. Browne's work. A. GR.

AMERICAN FRUITS IN FOREIGN COUNTRIES.—We learn by a letter from WILLIAM TUDOR, Esq., of Boston, (well known in the four quarters of the globe for his extraordinary success in supplying Europe, Asia, and the West Indies with an abundance of American ice,) that exporting our finest fruits to the tropics and to far distant ports, in excellent condition, is no longer a matter of experiment.

"Ice houses and gardens," he observes, "will ere long go into alliance, as the White Doyenne (St. Michaels, or Virgalieu) pear, picked here in September, has been sold in Calcutta in February and March—peaches in Jamaica, and strawberries in Barbadoes. The Baldwin apple is sold in good condition in the East Indies two months after it is entirely gone in the neighborhood of Boston. Temperature has to do with an advance to ripeness in a very striking degree, and the importance and value of this fact is not sufficiently and extensively known."

We should be glad to receive a more detailed account of the mode of packing and transporting fine fruits in low temperature.—ED.

NORTON'S SEEDLING GRAPE.—This native grape has borne well, and ripened a good crop of fruit with us, this season. It proves, in our estimation, unworthy of cultivation as a *table grape*. It is pulpy, and the flavor poor. As a *wine grape* we understand it bears an excellent reputation.

TRANSPLANTING EVERGREENS.—Who is not pleased with the fine rich green of the pines, firs, and cedars, among the ornamental trees which should embellish every country residence,—especially while every thing else is stripped of its verdure, by the hand of winter? But, while all admire and desire evergreens, the opinion is general that their removal from the forest or nursery ground, is one of great difficulty and hazard.

In such cases, that only is difficult or hazardous, which is not understood. Experience shows most plainly that pines and firs are not to be treated as common deciduous trees, which may be torn from the ground, with denuded roots, and re-set without loss or danger. But because a different course is needed for evergreens, we must not hence conclude, that when treated according to their peculiar need, there is any uncommon difficulty. Let the means be only adapted to the end, and all gardening operations become easy.

A leading requisite, to which the attention should be directed, is that the tree, after removal,

be similarly situated, as regards the roots and the supply from them, as before. The roots of evergreens are usually more fragile than those of other trees; hence, it is very hard to get them entire, if separated from the soil which encircled them. And hence, it becomes quite important to *remove the soil with them*. We have set out large numbers of white pines, American arbor vite, and other evergreens from the woods, from five to twenty feet in height, and scarcely ever lost one of them. We have on the other hand, observed hundreds of much less size, set out by others, and in some instances not one in fifty survived removal. In the first instance, large, circular cakes of earth adhered to the roots; in the other, they were taken, bare, from the soil. In some of the successful cases alluded to, two or three hundred pounds of earth remained on the roots of single trees; but for trees five or six feet high, ten or fifteen pounds are enough. Where they are to be carried on a wagon to a distance, the earth will be found to adhere better, without being jolted off, if the trees are selected from mucky places, or from the borders of swamps, and these do well removed to upland. But this is not very essential, provided they are carefully taken up, and the earth properly secured by wrapping or packing. *In no case whatever, did we ever know an evergreen tree to be lost by transplanting, where a full sized circle of earth was removed in contact with the roots.* As a general guide to the size or weight of this circle, it should be heavy enough to prevent the tree from blowing down, after it is set out, without staking.

"But," exclaims some one, "are we to be taxed with the labor and expense of carrying this great load of soil on every tree?" Certainly—this is the price of your beautiful evergreens—who would grudge it? Besides, this is the cheapest way of getting them; one fact in our knowledge as an illustration. Two neighbors went many miles for a load each of white pines. One brought only a dozen, with plenty of earth on the roots; every one lived and flourished. The other, thinking to do better, brought fifty, with denuded roots. Only one lived. Which was the cheaper bargain?

In cases where the earth cannot be had upon the roots, many may be saved by a strict observance of the usual provisions of nature. The roots of evergreens are commonly confined very nearly to the surface; the flat faces of the pine stump fences of some districts exhibit this habit on a large scale. In setting them out therefore, it is best to retain that shallowness,—provided other requisites can be secured. That is, if set shallow, a full supply of moisture must be maintained by a thorough admixture of muck with the soil on which they stand; and a covering of leaves to retain the moisture, in imitation of the natural coating in the woods, must not be omitted. Watering, if necessary, must be freely and repeatedly given. The immersion of the roots in a thick, rich, mucky mud, just before setting out, is of the highest importance. Put if the requisites, just mentioned, for maintaining moisture at the roots, cannot be fully attained, it is much better to set the tree deeper, with mudded roots as already mentioned,

and the soil to be well and closely settled among the roots by throwing in water.

These requisites should be also attended to, in setting out evergreens from the nursery, where, by occasional removal, the roots may be well fitted for the operation, and the danger so much diminished, as scarcely to be taken into account. J. J. T., *Macedon, N. Y.*

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STRICTURES ON PRINCE'S MANUAL OF ROSES.—For many months the note of preparation has been sounded for the advent of this very remarkable book, and it has at length appeared, with a title page, dedication and preface, which leave no room for doubt as to who would be thought "the author." The Rose is indeed the brightest gem in Flora's wreath, and with great truth, has long been designated "the Queen of Flowers." From the fact that it possesses *enduring* qualities, it is universally admired, and at the present moment commands more attention than any other flower with which we are acquainted. To write about them, must be particularly agreeable, and several monographs have been published in Europe and America illustrative of their peculiarities of fragrance, size, form, and other essential properties. Of these, one of the best is "The Rose Amateur's Guide," by T. Rivers, Jr., pp. 209, London, 1843, third edition, a work yet very scarce in this country, as but a few copies have been imported to individual orders. Now Mr. Prince has a very high opinion of Mr. Rivers' "estimable work," and has combined in the pages of the "little volume" which heads this article, "*every item of knowledge*" from Rivers' book; in other words, *he has copied it entire, combining in his preface the following items of knowledge in the very language of Rivers' introduction.*

At page 7, he says, "the present little treatise, which has been prepared at leisure moments, may be considered as a general guide to the lovers of the Rose. All the details are given with candor, and throughout its entire pages, *the author* (mark that) has cast aside all business prejudices, and discussed the subject as an admiring amateur." This is all very well; but what says Mr. Rivers? At page 9, he remarks, "As a guide, then, to the lovers of roses, this little treatise has been written in the few leisure moments allowed me by the unceasing cares of a general nursery business;" and at page 10, "I have endeavored to lay aside all business prejudices, and only to view them (roses) as an admiring amateur." Again, says Mr. Prince, "Some new roses inserted in the catalogue have only bloomed here one season, and perhaps not in perfection, so that accurate descriptions could not be given of them; the most of these are undoubtedly fine varieties. In classing the roses, I have retained those which are but slightly hybridized in the division to which they have the nearest affinity: for instance, if a rose between the French and Provence roses, has more of the character of the former than the latter, it is retained with the French roses, as it will group well with them, though not a pure French rose; this helps to avoid too numerous subdivisions." Now this is all copied from page 11 of Rivers' introduction, and

affords an admirable specimen of the art of *combining* "items of knowledge" according to the latest improvements. "The author" intended manifestly to pass off the "little" treatise as his own, and every page gives evidence of his design, that such should be the opinion of all who read it. He sails, however, under a piratical flag, and richly merits the scorn of every right thinking man. We say, that with a few trifling alterations, additions, or omissions, Mr. Prince has *copied Mr. Rivers' whole book*, appropriating page after page with a boldness we have never seen equalled. One or two illustrations will be sufficient to show *how* Mr. Rivers has been dealt with. In the chapter on hybrid China Roses, page 64, Mr. Prince thus remarks: "To one fine variety, too much attention cannot be directed, and this is Chenelole, so called from a member of the Chamber of Deputies for Calvados, a district in Normandy, where this fine rose was raised. It has often been asserted that no rose could compete with Brennus in size and beauty; *but I feel no hesitation in saying*, that in superior brilliancy of color, and size of flower, this variety is superior; the foliage and habit of the plant are also much more elegant and striking; in color, its flowers are of a peculiar glowing vivid crimson, discernable at a great distance; it is indeed an admirable rose, and cannot be too much cultivated." Who has no hesitation in saying? We place a part of the language in italics, but the *whole* is an exact copy from Rivers, p. 51. At p. 93, Mr. Prince thus elegantly *combines* one of Mr. Rivers' "items:" "Hybrida, or Laure Davoust, is a hybrid, and a most elegant and delicate rose, having all the peculiar neatness of the double red and white varieties, with larger flowers and more beautiful foliage. This is one of the prettiest climbing roses known, and also one of the hardiest of its class. *A Genevese friend informs me*, that some pillars of this rose at Geneva are thirty feet high, and covered with flowers the greater part of summer." We italicize, and ask the reader to bear in mind, that *every word* is copied from Rivers, page 85, and we trust the "*Genevese friend*" will not soon be forgotten. It is thus throughout the whole book, that Mr. Rivers is handled, and we are very much mistaken, if when he makes the discovery, he (Mr. Rivers) will not publish a card of thanks for these *princely* favors. From page 179 to page 196 of "Prince's Manual," *every word* is copied, notes and all, and we shall close this notice, by presenting the reader with the following *extraordinary coincidence* of thought and language, see page 195 of Prince, and 192 of Rivers.

"The most elegant pot roses for exhibition may be selected from those families recommended for greenhouse culture; but as it is now the fashion for horticultural societies to offer prizes for "roses in pots," it becomes my duty to offer a few observations on growing hardy varieties of roses in pots, so as to form very large plants. I must here caution the reader, that occasional disappointment must be expected in growing them in pots for exhibition, as roses like facts, are stubborn things, and will often, in summer, bloom just whenever it pleases them to do so, not being easily retarded or forced. Those roses recommended for green

house culture, from their producing a succession of bloom, must be most relied on by the exhibitor; but if by a lucky chance, a collection of moss roses, or some of the finer kinds of French and Hybrid Bourbon roses, could be enticed to show themselves in all their gay attire on the day, they would make the green-house roses 'hide their diminished heads.'"

We commend this "author" to the notice of horticulturists generally, and his "little treatise" as a fair specimen of his abilities to deal in exaggerated statements. *Pro patria. New-York, Oct. 28, 1846.*

.....
SALE OF THE MAGNIFICENT CAMELLIAS WILDERII AND MRS. ABBY WILDER.—The Boston Transcript states that these splendid SEEDLING CAMELLIAS, grown by M. P. Wilder, Esq., President of the Massachusetts Horticultural Society, and which have elicited so much praise from amateurs, and to which that Society awarded their highest token, a superb piece of *Silver Plate*, valued at FIFTY DOLLARS, have been sold to Mr. James L. L. F. Warren, the proprietor of Nonantum Vale Gardens, for the handsome sum of ONE THOUSAND DOLLARS.

.....
INFLUENCE OF THE SCION UPON THE STOCK.—Upon removing the plants from a bed of seedling Canada plums (the wild red plum of our woods), about a hundred of which were budded last summer with the Imperial Gage, Red Gage, and Jefferson plums, and which had made a growth of four or five feet the present season, and were quite stocky, I found that the amount of roots of the budded trees was less than half of those remaining unbudded, and the color was a shade deeper. The Canada plum is remarkable for the amount of roots which it emits, compared with those of the domesticated plum; but in the case of these budded trees, the roots seemed not to have increased from what they were probably last spring, while the tops were larger than those not budded. The influence of the stock upon the scion is a matter which has been much discussed; but I do not recollect ever to have seen any thing upon the influence of the scion upon the stock, or at least as it regards the growth of the roots. The saying of Lord Bacon that "the stock is passive, the scion overruling it quite," seemed here true in a manner I had before thought of. How is it to be explained? Is not something similar seen in the case of pears upon quince stocks? Yours with respect. *S. L. G. Saco, Maine, October, 1846.*

.....
BUFFALO HORTICULTURAL SOCIETY.—The last exhibition of this Society, for the season, was held on Wednesday, the 30th of September, and it is with feelings of pleasure that the committee present so gratifying a result. Notwithstanding there had been repeated calls upon the enthusiasm of the prominent friends of Horticulture in this section, since our last exhibition, in consequence of the State Fair, and the Agricultural Fair in our county, at both which the evidence of the influence of our Society was prominent, still there was no diminution of energy or lack of spirit at our last exhibition, but, on the contrary, all seemed animated

with a still stronger desire to push forward in that beautiful department of culture which is the especial object of the Association.

The show of Fruits very far exceeded the expectations of all. Apples, Pears, Peaches, Plums, Grapes, &c., were exhibited, which, for variety and cultivation, would compare favorably with any section of the Union. Among the Apples shown, were some from R. Starkweather, Esq., which weighed, singly, twenty-five ounces.

It is not our intention now to go into a labored report, and we shall therefore confine ourselves to the catalogue of contributions. The show of Flowers was very beautiful. Roses, Dahlias, Verbenas, and the numerous other beautiful annual and perennial flowers now in bloom, made up into beautiful bouquets, by the contributors or the fair hands of our Ladies' committee, contributed to enliven our show room. In vegetables there was also a very respectable representation, among which a mammoth Squash, sent as a delegate from the Great West, and presented by Samuel T. Atwater, Esq., stood very conspicuous.

Prior to the sale of Fruits, Flowers, &c., the President, Mr. L. F. ALLEN, delivered a very excellent and spirited address before the Society, and a crowded and attentive audience of citizens generally. Mr. A. dwelt upon the importance and results naturally arising from a well organized society of this kind, and gave some statistical account of the progress of Horticulture in and around Buffalo for the past twenty years, and wound up with many sound and practical suggestions for the future. These are the kind of addresses for the people, and of which we hope during another season to hear more frequently. At the close of the address it was moved and seconded that a vote of thanks be tendered the President, for his very able and instructive lecture, which was unanimously responded to.

[After an enumeration of the articles exhibited, for which we have not room, the committee say:]

The Flowers at the September show, for rarity and fine culture, exceeded any previous exhibition, except that of June. Our professional gardeners, particularly Messrs. Webb, Tyler, and Mr. B. Hodge, contributed in a high degree to render this feature very attractive. The contributions of amateurs, also, evinced much good taste and careful culture.

The committee cannot but share in the general feeling of gratification at the happy completion of our labors for the present year, giving presage as it does of renewed vigor and emulation for another year. Already has a spirit been excited for the pursuit of this beautiful portion of labor which bids fair to produce important results, materially enhancing our pleasures and comforts. It is with pleasure we point to the reports of our past exhibitions, showing as they do, that we are continually progressive. Many individuals, whom a year or two since scarcely thought of putting a seed in the ground, or transplanting a single shrub, now show very respectable contributions; and of this class, the number is rapidly increasing. Our catalogue of contributions will also show that we have those in our society who are not "weary of well-doing,"

but at each succeeding exhibition are promptly ready with fair offerings to Flora and Pomona.

With such a spirit as this, and with the continued assistance of our Ladies, whose aid has proved so efficient during the past year, we may reasonably look for the time, and that not far distant, when Fruit and Flowers of the finest and most choice kinds shall be no rarity in our private gardens, and our markets be stocked with as fine specimens of Fruits and Vegetables as that of any other quarter of the Union.

At an early day the proceedings of the society for the past year will be published, together with an outline of the plan of proceedings for the next season. An important change in our proceedings is contemplated, which, if carried into effect, will probably add materially to the efficiency of our society.

C. F. S. THOMAS, *Rec. Sec'y.*

SALT FOR MILDEW.—Grapes have been much injured in this vicinity for several seasons past by the Mildew. Sulphur has been profusely used without any beneficial effect; and the best remedy that has been applied as yet, is a weak solution of salt. Those who have tried it with caution, have met with almost entire success. It should be carefully used, or the remedy will be as fatal as the disease. The quantity of salt should be barely sufficient to be *tasted* in the water in which it is dissolved. The solution is applied by a syringe, over the fruit and foliage, as frequently as there is the least appearance of the disease.

A correspondent of yours speaks of using salt hay to prevent mildew upon the gooseberry. In this section of the state, the gooseberry is so much injured by this disease, whatever pains may have been taken to guard against it, that it is but little cultivated for the table; but in Newport and its vicinity, it is raised without any care in perfection. That place, as you well know, is much exposed to the winds from the ocean, and fogs are of very frequent occurrence. We have often heard it stated that grapes cultivated near the sea, are more free from the disease than elsewhere.

We are inclined to believe that salt properly applied, may be a specific for the disease. Spread upon the soil it may not produce any beneficial effect, unless used in such quantity and so often as to endanger the life of the plant. Heat and moisture operating upon salt hay, gradually causing its decomposition, gives to the salt a continued and durable operation, protecting the plant from the dangers of injury to which it is constantly liable. It may act "as a stimulant," or "a shield to protect the roots," but we believe that syringing the fruit and foliage repeatedly with a weak solution of salt and water, would produce as much effect. We intend to try this experiment, whether salt hay may not act equally as well, when the roots are entirely protected from its operation. *L. C. E. Providence, Aug. 25.*

IMPROVEMENT IN GLAZING.—I practice what I conceive to be an improvement in glazing greenhouse sashes.

In the lapping of the glass, instead of using put-

ty, as is usual, which soon falls out and crumbles from the continual moisture, &c., I substitute white lead, thus: Take ground lead, as sold in kegs, of good consistency, and spread with a knife on the edge of each plate of glass a line of about three-eighths of an inch in breadth. Lay the panes in their place on the sash, gently press them together till they are solid, and tin them firmly down as usual. When all are thus laid, a chisel run on the two edges takes off what may have been expressed, leaving a solid joint impervious to either air or moisture, and gives a neat appearance. The greatest evil we have to contend with in mid-winter is *wind*, and this method entirely excludes that, besides strengthening materially the glass itself. I have tested this method for seven winters, and feel assured both of its utility and economy. Yours, truly, *W. R. C. Buffalo, Oct. 13th.*

THE LOCUST.—In that most excellent work, the Horticulturist, opinions have been advanced, which however true and applicable to the banks of the Hudson, might lead to error here.

At the risk of being thought presumptuous in differing from such high authority, I would ask—are there really two *distinct* varieties of Locust (*Robinia pseudacacia*) or may not locality produce all the *existing* variety?

It is common in this section of country to hear persons speak of the White Locust and the Yellow Locust; but I have invariably found that locality, and particularly age, make the difference. I have never seen a tree of large size felled that had not yellow and apparently durable timber. If, on the contrary, they be felled while young (especially if grown in rich soil) the annual layer of alburnum being much greater, the wood is porous, light colored, and much less durable. So well aware of this fact are our farmers that they will not pay for such half price. The Locust cultivated here for the beauty of its foliage and inflorescence, bears the greatest abundance of seed, and now within sight, are trees literally black with seed pods; and when they attain to the age of thirty years, they present precisely the appearance described by yourself as had by the seed locust, and yet they are cultivated for the known value of their timber.

My father, who, in advance of his compeers, nearly forty years since, foresaw the advantage of their cultivation in this region, carried out his utilitarian habit, by raising hundreds from seed, and planting groves, in whose shade and delightful fragrance many of my youthful hours were spent. These groves have lost none of their beauty, unless perchance by the storm which sometimes overthrew a *mouse-encircled* tree. Of these the color of the wood (and I presume durability) might be anticipated by the spot where they grew.*

If those noble trees at Clermont were cut, the wood would (unless I greatly err) be yellow, compact, and more durable than any other except—locust.

The opinion prevails here that two varieties of

* These groves were mostly planted on knolls where the cropping out of limestone prevented the use of the plow, or by the road-side.

Tulip Poplar (*Liriodendron tulipifera*) exist; because of the color and hardness of the wood; and it might be said, manner of growth, for certainly varieties of the locust cannot differ more. And yet the most acute among those who entertain this opinion cannot tell before the tree is felled whether the wood will be *white* or *yellow*, *tough* or *brittle*. A knowledge of vegetable physiology and a close observation of soil, exposure, elevation and age, might enable one to *guess*.—J. K. E.

REMARKS.—We were for some time as skeptical about the two varieties of locust as our correspondent. But we have several times lately examined the matter very carefully in Dutchess county—perhaps more fully planted with this tree than any other in the Union. We have seen the two kinds growing side by side, yet showing all the characteristics of each in habit of growth, foliage and fruit. We cannot, therefore, but think the *seed-locust* a very distinct variety.—Ed.

MASSACHUSETTS HORTICULTURAL SOCIETY.

Exhibition of Saturday, Oct. 10, 1846.

FLOWERS.—From the President of the Society, 50 blooms of dahlias, among them very fine specimens of *Cleopatra*, *Tassett's Indispensable*, *Viscount Resseguir*, *Eveque de Bayeux*, *Iss. Ophir*, &c. &c.

From William B. Richards, 50 blooms of dahlias, among them several fine specimens.

From J. L. Gardner, by Daniel Crowley, 50 varieties of dahlias, comprising among them fine specimens of *Indispensable White*, *Lady Antioch*, *Reeswang*, *Cleopatra*, *Viscount Resseguir*, *Dodd's Prince of Wales*, &c. &c. Also a fine display of sweet pea blossoms, pinks, marigolds, and other cut flowers.

From Lewis Davenport, Milton, a very fine display of Tea and sweet tender roses, and fine Verbenas.

From J. L. F. Warren, 150 dahlias, among them fine specimens of several of the new kinds. Also six very fine round table bouquets.

From James Nugent, six bouquets, composed of evergreen, globe amaranthus, and eternal flowers. Also 25 specimens of dahlias.

From John Hovey, four dahlia bouquets, and cut dahlias in variety.

From Miss Russell, a fine pyramidal bouquet, and three small bouquets.

From Hovey & Co., six fine table bouquets, composed of roses, verbenas, heliotrope, &c., &c.

The committee award to Miss Russell a premium of \$2, for a very chaste pyramidal bouquet.

For the Committee, H. W. DUTTON.

FRUIT.—From M. P. Wilder, President of the Society, pears, Buffum, Gore's Heathcote, Fulton, very fine. The Committee tasted of Gore's Heathcote, and found it first rate.

S. G. Perkins, Esq., Brookline, remarkably fine pears; the following is the list sent in by him: *Easter Beurre*, *Beurre Diel*, *Duchesse d'Angouleme*, *Great Unknown*, *Mons Le Cure*, *Dix*, *Josephine*, *Chamontel*, *Winter Nelis*, *Napoleon*, *St. Michael*, *Winter Doyenne*, *Louise Bonne*, *Jalousie*, *Seckel*, *Isambert*, *Vanillons*, *Leon le Clerc*, *Marie Louise*, *St. Germain*.

From E. Brown, Lynn, pears, *Roi de Wurtemberg*, very fine, *William's Bon Chretien*.

From Charles Hadwin, Worcester, Strawberry apples.

From Otis Johnson, Lynn, peaches, *Smocks's Freestone*, *Kendrick's Heath*, both fine.

From James Eustice, South Reading, two kinds of apples for a name.

From R. Manning, Pomological Garden, Salem, Columbia peach, very handsome; pears, *Cand's* new, of rich flavor. *Beurre Bose*, and *Paradise d'Automne*.

From O. H. Mather, by Thomas Needham, Brighton, grapes, *White Portugal*, *White Frontignan*, *Black Frankendall*, *Black Hamburg*.

From Zelotus Hosmer, Cambridge, pears, *Duchess d'Angouleme*, very fine and large, and *Beurre Diel*, fine.

From John Fisk Allen, Salem, pears, *Gansel's Bergamont*, *Beurre Diel*, *Bonne Louise*, (of Jersey), *Seckel*; grapes, *Black Hamburg*, and *Syrian*; peaches, *Late Admirable*.

From G. Merriam, West Newton, peaches, *Seedling*, *Crawford's Late Melacoton*, *Bergen's Yellow*, *Old Mixon*.

From James W. Sever, Dorchester, *Crawford's Late Melacoton*, fine.

From Geo. Walsh, Charlestown, pears, *Easter Beurre*, *Beurre d'Arenburg*, *St. Michael*, *Buffum*, *Julienne*, *Winter Nelis*; grapes, open culture, *White Sweetwater*, *Isabella*, *Seedling*, and *Red Chasselas*.

From John Dunklee, Brighton, apples for a name, *Pomme Fameuse*.

From George A. Crocker, Taunton, peaches, unknown, large and handsome.

For the Committee, JOHN FISK ALLEN.

VEGETABLES.—From J. F. Hall, a cucumber weighing four pounds.

From A. D. Williams and son, fine celery.

For the Committee, A. D. WILLIAMS, JR.

Exhibition of Saturday, Oct. 17, 1846.

FLOWERS.—The severe gale of Tuesday prostrated nearly all the Dahlia plants in the vicinity; consequently few were exhibited.

From Hovey & Co., six bouquets, composed of *Roses*, &c.

From John Hovey, Roxbury, two Dahlia bouquets, and one of evergreen and Amaranthus, also about forty Dahlias.

From Dan'el T. Curtis, eight Dahlia blooms, six of which were of the new sorts.

From Lewis Davenport, Milton, a large collection of Tea, Bourbon, and other tender roses, Verbenas, &c.

From James Nugent, over fifty Dahlias, some of which were fine. Also ten very neat table bouquets, composed of Evergreen and Amaranthus.

From John Henshaw, Cambridge, a dish containing about a pound of *Alexandria Senna*, the first ever grown in the open air in this country. The quality of the leaves were pronounced by medical men as superior. The shrub from which the leaves were gathered, was received from Egypt a few years since, and has been cultivated at Mr. Henshaw's country seat. This is the *Senna* of the shops, the best in use for medicinal purposes.

For the Committee, H. W. DUTTON.

FRUITS.—From M. P. Wilder, President, Pears—*Dix*, *Fulton*, *Urbaniste*, *Glout Moreau*.

From Cheever Newhall, Pears—*Napoleon*, *Urbaniste*, *White Doyenne*; Peaches—*Seedling*; Grapes—*Syrian*, *Muscate of Alexandria*, *Black Hamburg*, *Zinfandel*, *Frontignan*, *Ohio*, extremely small in this climate.

From John Gordon, Pears—*Passe Colmar*, *Duchesse d'Angouleme*, *Napoleon*, *Louise Bonne de Jersey*; Apples—*Gravenstein*. (?)

From James Eustis, Apples—*Spice*, without a name, (handsome.) *Harvest Bough*, *Eustis*.

From Hovey & Co., Strawberries—*Boston Pine*, of second growth.

From John Heard, Pears—*Seckel*, *Forrest* (fine.)

From J. Fisk Allen, Pears—*Gansel's Bergamont*, *Seckel*, very fine, the largest weighing five to six ounces; Grapes—*Isabella*, fine, *Black Hamburg*; Peaches—*Late Admirable*.

From George Walsh, Pears—*Buffum*, *White Doyenne*, *Brown Beurre*, *Winter Nelis*, for a name, *Easter Beurre*; apples for a name; Grapes, *Sweetwater*, *Seedling*, *Red Chasselas*.

From Charles S. Hunt, Grapes—*Sweetwater*.

From John S. Ballard, Quince, weighing twenty-three ounces.

From Josiah Lovett, Pears—Gendeison, Flemish Beauty, the largest girthing twelve inches, Seckel, fine, Louise Bonne de Jersey.

From Henry J. Oliver, Apples—Rhode Island Greening, very large.

From J. M. Ives, Pears—Wilkinson, Winter Nelis, Fulton, Napoleon, Lewis, Capiaumont, Passe Colmar, Fondante (Van Mons); Apples—Golden Russet, Russet of Canada, Swaar, Red Doctor, Minister, Lyscom, Baldwin (spurious), Seaver's Sweet.

From Henry Vandine, Pears—Glout Morceau, Prince's St. Germain, Passe Colmar, Marie Louise, White Doyenne, Spanish Bon Chretien, Turkish Bon Chretien, Treasure.

For the Committee. EBEN WIGHT.

VEGETABLES.—From Josiah Lovett, Beverly, six remarkably large and fine heads of Broccoli.

From A. D. Williams and Son, three fine heads of Celery.

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Exhibition of Saturday, Oct. 24th, 1846.

FRUIT.—From M. P. Wilder, President of the Society, Pears, Duchesse d'Angouleme (fine), Marie Louise.

From Cheever Newhall, Grapes—Syrian, Black Hamburg, Muscat of Alexandria.

From Samuel Downer, Jr., Pears—Louise Bonne de Jersey, White Doyenne.

From Joseph Breck & Co., Pears—Gratiola d'Hiver.

From S. L. Goodale, by Joseph Breck & Co., Pears—McLaughlin.

From G. P. Fowler, by Joseph Breck & Co., Pears—Charles of Austria and Sieulle, very large and fine.

From John Henshaw, Quinces, Pyrus japonica.

From Jos. Harrington, Pears—White Doyenne, Duchesse d'Angouleme.

From J. Fisk Allen, Pears—Verte Longue d'Automne, Seckel (fine), Chaumontelle; Figs, four varieties; Grapes—Syrian, Black Hamburg, Muscat of Alexandria, Charlsworth Tokay, Black Prince, Zinfandel, Red Chasselas, White and Purple Frontignan, Worthy Hall Seedling.

From George Walsh, Pears—Bulfam Dix, White Doyenne, Brown Beurre, Winter Nelis; Grapes—two varieties of seedlings, Sweetwater.

From Alfred S. Andrews, Pears—Uvedale's St. Germain.

From J. Gordon, Pears for a name.

For the Committee.

EBEN WIGHT.

VEGETABLES.—From A. D. Williams. Cauliflowers and Broccoli.

From Alfred A. Andrews, very large Carrots.

For the Committee, A. D. WILLIAMS, JR

PENNSYLVANIA HORTICULTURAL SOCIETY.

Reports of the Committees for awarding premiums at the Eighteenth Autumnal Exhibition, held September 16th, 17th, and 18th, 1846.

The Committee on Grapes respectfully report, that they have awarded the following premiums, viz.

NATIVE.

For the best Isabella, six bunches, to G. D. Smith.

next best do. do. to Henry N. Johnson.

best Bland or Powell, do. to Townsend Hilliard.

best Catawba, do. to Henry N. Johnson.

next best do. do. to G. D. Smith.

best Elsinborough, do. to Townsend Hilliard.

next best do. do. to Lewis Craft.

best of another variety, do. to Isaac B. Baxter.

FOREIGN, raised in the open air.

For the best Hamburg, four bunches, to Edwin Middleton.

Hansteretto, do. to Gebhard Harres.

Chasselas, do. to Jeremiah Comfort

White Gascoigne, do. to Jeremiah Comfort

of another variety, do. to Peter Sluster.

FOREIGN, raised under glass.

For the best without artificial heat, to John Dougherty.

For the next best without artificial heat, to John Sherwood.

For the best with artificial heat, Hamburg, to Wm. Westcott, gardener to Joseph Cowperthwait.

For the next best with artificial heat, Frankenthal, to Geo. W. Carpenter.

And a special premium to J. Cowperthwait, for a bunch of White Syrian, of extraordinary size, ten dollars.

And a special premium to F. M. Bodine, from N. Dunn's cottage, Mount Holly, for Reine de Nice, five dollars.

And a special premium to Caleb Cope, for his splendid variety and Grape Arbor, five dollars.

And a special premium to John Ansach, three dollars.

And a special premium to William McKee, gardener to C. Chauncey, for his festoons, three dollars.

And your committee may well congratulate the Society on the rich display of Grapes at this exhibition, surpassing far that of any former display.

Your Committee are indebted to Mr. Arnold of New-Bedford for the most perfect bunch of Black Hamburg Grapes ever exhibited, but which came to hand late on the third day.

E. W. KEYSER.

R. BUIST.

FRANKLIN PEALE.

Philadelphia, Sept. 17, 1846.

The Committee for awarding premiums on Stone Fruits, etc., report that they have awarded premiums as follows,

PEACHES.

For the best, one bushel, to Allen Jones, for Crawford's Late Meleocoton.

For the next best, one bushel, to Isaac Pullen, for same.

For the next best, one peck, to General G. Hartman, Red checked Meleocoton.

For the next best, one peck, to Edward W. French, Crawford's Late Meleocoton.

For the best two dozen, to Wm. Johns, Meleocoton.

Special Premiums for Peaches:

Charles M. Harker, for seedling, five dollars.

Joseph E. Scott, seedling, one bushel, five dollars.

Isaac B. Baxter, for a display, three dollars.

John C. Clark, do. three dollars.

Mrs. B. E. Valentine, do. three dollars.

John Sherwood, do. two dollars.

Wm. R. Hanson, do. two dollars.

NECTARINES.

For the best two dozen, Elruge, to John Sherwood.

PLUMS.

For the best two dozen, Coe's Golden Drop, to C. J. Mac-

cuen.

For the next best, Griffith's Seedling, to Dr. C. M. Griffith.

WATER MELONS.

For the best Spanish variety to Jos. J. Hatch.

For the next best Spanish variety, to Joseph C. Zane.

Special premiums, to Miss Gratz, two dollars.

do. do. to Wm. Brown, two dollars.

do. do. to George Cattell, two dollars.

NUTMEG MELONS.

For the best to Joseph C. Zane.

For the next best, to Caleb Cope.

And special premiums, to Thomas Hancock, for Spanish

Cob Nuts, three dollars; and to Miss A. Graham, Walnuts,

two dollars.

Respectfully submitted,

THOMAS HANCOCK.

THOMAS MCEVEN.

Philadelphia, Sept. 17, 1846.

ARCHIBALD HENDERSON.

The Committee for awarding premiums on Pears, Apples, etc., report that they have awarded the following premiums,

PEARS.

For the best Seckel Pears, one peck, to Robert Henry, gardener to George Blight.

For the next best Seckel Pears, one peck, to F. Allgier.

For the best Beurre or Butter Pears, one peck, to Jacob

Snider, Jr.

For the next best do., to Malcolm Macuen.

For the best Bartlett, half peck, to Jacob Snider, Jr.

For the best of another variety, one peck, to Samuel A.

Walker.

For the next best do. to Col. Carr.

For the best and most numerous named varieties, to J. Rutter.

For the next best do., to J. W. Hayes.

For the next best do., to Thomas Hancock.

APPLES

For the best one bushel, to Jacob Haines.
 For the next best do., to John Perkins.
 For the best one peck, Henry N. Johnson.
 For the best and most numerous named varieties, J. Moon.
 For the next best do., to John Perkins.
 For the next best do., to George B. Deacon.

QUINCES

For the best half peck, to Judge Isaac Wilkins.
 For the next best do., to an unknown contributor.
 The Committee have also awarded special premiums, viz.
 To John B. Smith, Landreth & Fulton, S. Maupay, James
 Dindas, Mrs. H. G. Freeman, Jacob Semmell, John C. Clark,
 W. Chancellor, G. Liggett, Miss Gratz, I. B. Baxter, T. S.,
 for a fine display of Pears, two dollars each.

To Gen. M. S. Wade of Cincinnati, for a most magnificent
 display of Apples, including the Emperor Alexander, \$5.
 To Thomas Hancock, for an interesting display of seed-
 ling varieties of Apples, five dollars.

To Daniel Holland, Henry Spachius, J. Comfort, J. Fell,
 G. W. Carpenter, J. Kaighn, H. G. Freeman, for fine Apples,
 one dollar each.

To J. C. Whitall, for fine Oranges and Lemons, two dollars.
 To Miss Gratz, for fine delicious figs, three dollars.
 To J. B. Smith, for fine German Medlars, two dollars.

W. D. BRINKLE,
 PETER MACKENZIE,
 GEO. ZANTZINGER.

Philadelphia, Sept. 17, 1846.

The Committee for awarding premiums on Vegetables,
 respectfully report the following as the result of their exam-
 ination, viz.

POTATOES.

For the best, one bushel, to Samuel Cooper.
 For the next best do., to Joseph C. Zane.
 A special premium for seventeen varieties of seedlings, to
 J. J. Jennings, five dollars.
 For the best Sweet, one bushel to G. Brown.
 For the next best do., to C. Hopkins.

ONIONS.

For the best four dozen, to J. Riley, gardener at the In-
 sane Hospital.

For the next best do., to A. Felten.

CABBAGE.

For the best six heads, to P. Gallagher, gardener to Miss
 Gratz.

For the next best do., to A. Felten.

For the best Red do., to J. J. Jennings.

For the next best do., to S. Cooper.

CARROTS.

For the best, garden culture, to A. Felten.

For the next best, do., to W. Hall, gardener to C. Cope.

BEETS.

For the best, one dozen, and the next best do., to A. Felten.

LETTUCE.

For the best six heads, and the next best do., to A. Felten.

ENDIVE.

For the best blanched six heads, to A. Felten.

For the next best do., to S. Cooper.

CHARD.

For the best, six heads, to Anthony Felten.

For the next best do., to Samuel Cooper.

CARDOON.

For the best, six heads, to Anthony Felten.

For the next best do., to J. Jones, gardener to G. G. Leiper.

CELERY.

For the best, six stalks, to W. Sinton, gardener to G. W.
 Carpenter.

For the next best do. to J. Jones, gardener to G. G. Leiper.

SALSIFY.

For the best, two dozen, to Anthony Felten.

For the next best, do., to Samuel Cooper.

EGG PLANTS.

For the best six, to J. Jones, gardener to G. G. Leiper.

For the next best do., to J. Riley, of the Insane Hospital.

TOMATOES.

For the best, one peck, to Anthony Felten.

For the next best do., to J. Jones, gardener to G. G. Leiper.

CRANBERRIES.

Not the quantity exhibited.

PUMPKINS.

For the largest, two, to A. Henderson, gardener to W.
 Chancellor.

For the next largest, do., to Anthony Felten.

VEGETABLES

For the best display, to Anthony Felten.
 For the next best do., to J. C. Engleman.
 For the next best do., to Samuel Cooper.
 For the next best do., to J. Jones, gardener to G. G. Leiper.

HERBS

For the best display, to Jeremiah Foulk.

For the next best do., to D. Trites.

For the next best do., to Jeremiah Foulk.

Special Premiums.

To W. Sinton, gardener to G. W. Carpenter, for a display,
 two dollars.

To R. Henry, gardener to G. Blight, for a display, two
 dollars.

To A. Patton, gardener to Mrs. Kohne, for a display, two
 dollars.

To A. Henderson, gardener to W. Chancellor, for a dis-
 play, two dollars.

To D. R. McCrone, gardener at the Friend's Asylum,
 for a display, two dollars.

To John Austin, gardener to Isaac B. Baxter, for a display,
 two dollars.

To John Jackson of Darby, Pa., for a display, two dollars.

To J. R. Bowman, of Lower Merion, Pa., for a display,
 two dollars.

To Dr. Rivinus, for very fine Turnip Celery, two dollars.

The committee have taken favorable notice of the follow-
 ing, viz

Edward Rogers, very fine display.

John Riley, gardener at the Insane Hospital, very fine
 display.

Wm. Hall, gardener to Caleb Cope, a very fine display.

R. Buist, Celery and Potatoes.

Miss Mc Donald, Mexican Gourd.

Joseph Diamond, Valparaiso Squash.

J. C. Engleman, superior Sugar Corn.

JAMES REMINGTON.

EDWIN MEREDITH,

J. W. MARTIN,

HENRY A. DREER.

ISAAC B. BAXTER.

Philadelphia, Sept. 16, 1846.

The Committee on Flowers, Designs, etc., appointed to
 award the Society's premiums for the Eighteenth Annual Ex-
 hibition, beg respectfully to make the following report:

For the best twenty named varieties of Dahlias, three dol-
 lars to Gerhard Schmitz.

For the next best do., two dollars, to Gerhard Schmitz.

For the best American Seedling Dahlia, parti-colored, three
 dollars, to Gerhard Schmitz.

For the best do., self-colored, three dollars to G. Schmitz.

For the best and most appropriate design formed of cut flow-
 ers, forty dollars, to Archibald Henderson, gardener to Whar-
 ton Chancellor, representing a Cottage Summer house.

For the next best design, thirty dollars, to Samuel Maupay,
 for the plan of a rural temple.

For the next best design, twenty dollars, to Joseph Cook, for
 a pretty rustic arbor.

For the next best design, fifteen dollars, to Samuel Maupay,
 for a representation of a grotto.

For the next best design, twelve dollars, to Samuel Maupay,
 for a plan of a pagoda.

For the next best design, ten dollars, to P. Gallagher, gar-
 dener to Miss Gratz, for a pretty rustic temple.

For the next best design, eight dollars, to Samuel Maupay,
 for a triumphal arch.

For the next best design, six dollars to Archibald Hender-
 son, gardener to Wharton Chancellor, for a large rural centre
 table.

For the next best design, five dollars, to the same, for a
 small centre table.

For the best and most approved bouquet, seven dollars to
 Robert Kilvington, for a beautiful Cone.

For the next best bouquet, five dollars to Archibald Hender-
 son, gardener to Wharton Chancellor, for a handsome basket.

For the next best bouquet, three dollars, to Peter Carolan,
 gardener to Samuel Welsh, for a handsome basket.

For the best bouquet, formed of indigenous flowers, five
 dollars, to Robert Kilvington, for a beautiful urn.

For the next best bouquet, three dollars, to Peter Carolan,
 gardener to Samuel Welsh, for a pretty basket.

For the best pair of wreaths, ten dollars, to Archibald Hen-
 derson, gardener to Chancellor Wharton.

For the next best do., five dollars for the same.

For the next best do., three dollars, to the same.

Agreeably to the schedule of premiums, your committee have been restricted from awarding any special premiums—yet they cannot feel satisfied, after taking into consideration the taste and skill displayed by several of the contributors of designs, as well as the beautiful addition to the scenic arrangement of the room, unless they recommend the following premiums to be awarded specially; and which they now cheerfully do as follows, viz.

Ten dollars to Alex. Caie, gardener to Mrs. Camac, for a beautiful rustic stand.

Five dollars to Archibald Henderson, gardener to Wharton Chancellor, for a flower settee.

Ten dollars to the same, for a pair of beautiful vases.

Forty dollars to Peter Raabe, for a pair of really magnificent cornucopias.

Five dollars to R. Feters, for a design of cut flowers.

Seven dollars to J. McKee, gardener to Charles Chauncey, for a very beautiful stand for exhibiting grapes.

Five dollars to Miss Weaver of West Chester, for a very pretty Cornucopia.

Three dollars to Wm. Hall, gardener to Caleb Cope, for a very handsome basket of cut flowers.

Your Committee in closing their report, beg to offer their sincere thanks to the different donors of cut flowers, for the daily contributions made by them in aiding the ladies in decorating the floral part of the exhibition.

All of which is respectfully submitted by

THOMAS C. PERCIVAL,
NATHANIEL KNOWLES,
W. H. DILLINGHAM,
GAVIN WATSON,
JOHN SHERWOOD.

Philadelphia, Sept. 21, 1846.

Report by the Recording Secretary.

The Eighteenth Exhibition of the Society was held September 16th, 17th, and 18th, 1846, in the Museum Building, as heretofore; the general arrangement was similar to former occasions; the lower saloon containing the exotic plants and large floral designs, the upper, the fruits and vegetables.

The plants were shown on tables of like construction to the last autumnal display; the designs were placed in various positions through the saloon with good effect, and consisted of fanciful temples, ornamental cottages, arbors, pagoda, triumphal arch, centre tables, settees, urns, vases, and other devices in increased numbers, in all of which there was a marked improvement in design and embellishment, and received due encomiums from the throng of discerning visitors which constantly graced the saloon.

The arrangement of the display, and the embellishment of the upper grand saloon, in which were arrayed the Fruits and Vegetables, were entirely different from those of former occasions, being in decidedly better taste, and reflected great credit on the originator of the plan. The great number of columns ranging from the galleries to the lofty ceiling, around the entire saloon, were beautifully entwined with evergreen wreaths of Laurel and Spruce, each wreath rising from the Spruce-covered base in admirable taste; fringing the gallery below the columns were the wreaths of Lycopodium, and under each pair of columns on the first floor, were suspended circular wreaths, thus finishing the embellishment with effect.

The tables which were laden with the weight of delicious fruits, etc., were constructed in the most admirable manner for displaying to the greatest advantage this portion of the exhibition, and were disposed at equal distances from the sides of the saloon, through the centre. The first in order, upon entering at the west end, was of circular form, twelve feet in diameter, rising by five terraces to an altitude of nearly six feet, on which were seen the splendid contributions of Peaches, in baskets and glass dishes, the top crowned with a very handsome stand of delicious foreign Grapes, tastefully festooned. The table next in order was one hundred feet in length and eight feet in width, with prominent circular ends of twelve feet diameter, rising by four grades on the south and three on the north range to the height of six feet; on the south were the various kinds of Fruits, the Pears, Nectarines, Plums, Quinces, Figs, Lemons, etc., interspersed in glass dishes; and suspended against a light ground at the topmost elevation, along the entire length, was shown the great abundance of Grapes, presenting this luscious fruit in the best light; on the north range were displayed great varieties of fine vegetables; on the top were the contributions of honey,

preserved fruits, grapes in pots, bouquets and arches of growing climbing plants. Crowning the circular ends of this great table, resting on the second elevation, were two splendid evergreen Cornucopias, twelve feet in height, and thirty inches in diameter at the opening, encircled with wreaths of beautiful flowers, the one on the west end pouring forth in the greatest profusion various kinds of fruits—the other at the opposite extremity, an immense amount of vegetables, an appropriate and most beautiful device. The next table in order was of similar dimensions and form with the first mentioned, covered with Apples, exhibiting a great pyramid of that important fruit. The last table to be described was one of immense size, and semicircular form, jutting out from the east end of the saloon, embracing its entire width between the columns, and ascending by grades almost to the gallery, on which was seen one contributor's collection, a rich display of esculents, containing in profusion almost every culinary vegetable in cultivation, and presenting a miniature mountain. A small beautiful Cornucopia from a neighboring county, pouring out its treasures of fruits and vegetables, was placed on the table containing the apples; and between this table and the large one, was a small chaste grape arbor, bearing most delicious foreign Grapes; a very pretty flower stand with handsome evergreen urn, interwoven with fine flowers, and topped with a vase of choice Roses, stood between the large table and the one containing the Peaches. In other parts of the saloon were tables containing vegetables, as those originally prepared proved insufficient.

For the detail of objects, reference may be had to the particulars which follow. A few seem to require a more especial notice, among which might be mentioned a splendid contribution of foreign grapes, grown in the open ground with the slight protection temporarily afforded by cauliflower sashes, during the sudden changes of the summer season, as represented by the contributor at the last autumnal exhibition. A splendid contribution of white Syrian grapes were shown, one bunch of which weighed eight pounds; another, a bunch of Black Hamburg from New-Bedford, which, for size and perfection of berry, has been unsurpassed; one contribution from Andalusia, and another from Germantown, were each creditable for variety and fineness of fruit. A beautiful peach, the Red-cheeked Melocoton, from Chester county, was remarkably fine. A contribution of apples, consisting of several varieties, from Cincinnati, Ohio, was the admiration of visitors, for beauty of appearance, both in regard to size and freedom from imperfections; one variety called Emperor Alexander, was a splendid specimen. Another contribution from Bucks county contained numerous varieties, remarkable on that account. Seedling plums from Spring Garden, and seedling apples from Burlington, New-Jersey, were exhibited.

A vegetable seldom seen and little known, the Celeriac, was presented from West Chester; a contribution consisting of seventeen varieties of seedling potatoes, from Bristol township was observed. A potato recently introduced, originating in New Holland, called the Hobart town variety, was reported to be an acquisition by the exhibitor.

Among the contributions of Plants exhibited, those shown by Caleb Cope, Col. Robert Carr, Gen. R. Patterson, Peter Mackenzie, Chalmers and McDonald, (Camden, N. J.) Robert Buist, Landreth & Fulton, and Ritchie & Dick, were remarkable for number, beauty, and variety.

Extensive collections of fine plants were exhibited also by James Dundas, Jacob Snider, jr., Peter Raabe, Henry A. Dreer, Frederick Alliger, William R. Hanson, Andrew Dryburgh, Robert Kilvington, William Carvill, and Dr. G. Watson.

Some fine specimens were also exhibited by John Morgan, Isaac Burk, and Mrs. Peale.

Magnificent and beautiful designs were exhibited by Archibald Henderson, gardener to Wharton Chancellor, Samuel Maupay, Joseph Cook, Patrick Gallagher, gardener to Miss Graiz, Peter Raabe, Alexander Caie, gardener to Mrs. Camac, and Richard Feters.

Baskets of flowers, bouquets etc., were exhibited by Robert Kilvington, Peter Carolan, gardener to Samuel Welsh, Miss Sydney Weaver, West Chester, William Hall, gardener to C. Cope, James McKee, gardener to C. Chauncey, Benjamin Gulliss, gardener to J. Snider, Miss H. Fleeger, Miss Percival, Robert Buist, Andrew Patton, gardener to Mrs. Kohne, Chalmers & McDonald, Gerhard Schmitz, and Landreth & Fulton.

Fruits were exhibited as follows:

John Sherwood, eighteen varieties of fine foreign grapes.

George W. Carpenter, fourteen varieties of the same.

Caleb Cope, twelve varieties of the same.

Joseph Cope exhibited two varieties of the same.

There were some interesting varieties of Grapes, both native and foreign, shown by the following exhibitors, John Mayberry, Wm. Arnold, N. C. Brainerd, James Dundas, Lewis M. Johnston, J. H. Newell, George H. Rogers, James Sinton, N. J. Jones, N. J. Rogers, Robert Rutter, and S. F. Fickel, Princeton, N. J. Wm. R. Hanson, James Lawes, Henry N. Johnson, G. D. Sinton, J. H. Sinton, S. Kayser, W. H. Proctor, Gedland Harris, J. B. Baxter, Townsend Hallard, William Johns, Peter S. Scott, James Sinton, L. A. Kewenau, Camden, N. J. J. O. Towner, Sinton, Sinton, Peter Rucker, and Lewis C. Craft.

Peaches were exhibited by Allen Jones, Burlington, N. J., Jane Pullen, Hightstown, N. J., Gen. G. Hartman, Chester co., E. W. French, Moorestown, N. J., W. Johns, John C. Clark, Newcastle, Del., Isaac B. Baxter, J. E. Scott, John Sherwood, Charles M. Harker, Mount Holly, N. J., Mrs. B. E. Valentine, A. G. Rowland, Edwin Middleton, C. D. Fell, Robert Johnson, W. R. Hanson, and Wharton Chancellor.

Pears.—John Rutter, West Chester, exhibited twenty-three varieties.

Jabez W. Hayes, Newark, N. J., twenty-one varieties.

Thomas Hancock, Burlington, thirteen varieties.

John B. Smith, twelve varieties.

Numerous delicious varieties of this fruit were also exhibited by Samuel Mayberry, Landreth and Fulton, Robert Henry, gardener to G. Blight, Frederick Alliger, Jacob Snider, jr., Samuel A. Walker, Malcolm Macuen, Col. Robert Carr, Jas. Dundas, Mrs. Henry G. Freeman, George W. Carpenter, Jacob Semelf, John C. Clark, Del., G. Liggett, Miss Gratz, Isaac B. Baxter, Townsend Sharpless, W. R. Hanson, Miss F. Fell, John Jackson, Dr. W. D. Brinckle, Edwin Middleton, George B. Deacon, J. H. Ruckman, and Wharton Chancellor.

Apples.—James Mook of Bucks county, exhibited fifty-nine varieties.

John Perkins, Moorestown, N. J., forty named varieties, and some unknown.

George B. Deacon, Burlington, N. J., thirty-four named varieties, and three unknown and three natural.

Thomas Hancock, Burlington, N. J., thirty-eight named varieties, and thirty-six seedling apples.

John Kaighn, N. J., seventeen varieties.

General M. S. Wade, of Cincinnati, Ohio, a Fall Pippin weighing 20 oz., a splendid fruit named Emperor Alexander, a Gloria Mundi weighing 27 oz., and some other varieties.

Five varieties were also presented by John B. Smith, Wm. R. Hanson, David Holland, Kingessing, Henry Spachius, Jeremiah Comfort, John Fell, G. W. Carpenter, Henry N. Johnson, Henry G. Freeman, Jacob Haines, Moorestown, N. J., and John Rutter, West Chester.

Quinces.—By Judge Wilkins, Camden, N. J.; Thomas Hancock, Burlington; George J. Leiper, Delaware county; H. S., and from Friends' Asylum.

By D. Landreth & Fulton, the Japan Quince, and by Robert Buist the Chinese Quince.

Nectarines.—By John Sherwood.

Plums.—By C. J. Macuen, Dr. C. M. Griffith, John Rutter, and Kate B. England.

Water-Melons.—By Joseph I. Hatch, N. J., Joseph C. Zane, Miss Gratz, W. Brown, George Cattell, N. J.

Nutmeg Melons.—By Joseph C. Zane and Caleb Cope.

Figs.—By Miss Gratz, Adam Price, N. J., John Nagee, Jonathan Mulford, and John B. Smith.

Miscellaneous Fruits.—By J. C. Whittall, Oranges and Lemons; Caleb Cope, Lemons and fruit of the double flowering Apples; John B. Smith, German Medlars; George W. Carpenter, fruit of Jambosa vulgaris; Mrs. Kohne, Papaws; John Rutter, Almonds; Dr. G. Emerson, Almonds; William R. Hanson, Osage Oranges; Thomas Hancock, Cranberries, and Spanish Cob Nut; Miss Gratz, Filberts; Girard Bank, Filberts; R. Kilvington, American Hard Nut, Miss A. Graham, Walnuts.

Vegetables.—Excellent and large quantities of almost every variety of known esculents were exhibited by Anthony Felten, Jno. C. Engleman, Samuel C. Cooper, George J. Leiper, Dr. E. I. Rivinus, D. R. McCrory, gardener at Friends' Asylum, George W. Carpenter, Robert Henry, gardener to George Blight, Andrew Patton, gardener to Mrs. Kohne, John Riley, gardener at Insane Hospital, Robert Buist, Wharton Chancellor, Isaac B. Baxter, John J. Jennings, John Jackson, Caleb Cope, Miss Gratz, Edward Rogers, James Diamond, N. J., Edward M. Heston, J. R. Bowman, Miss E. McDonald, Wm. H. Jewell, Jacob Murphey, Jacob Snider, jr., Charles Jessup, N. J., Charles Hopkins, N. J., George Brown, N. J. J. J. Hatch, and Jos. C. Zane.

Exhibition of November 17, 1846.

The attendance of visitors was good, and the display remarkably fine, and consisted principally of the following classes, of which there were seven extensive collections of choice and beautiful specimens. Also three collections of greenhouse plants, containing superb flowering Epiphyllums, Salvia, etc.

A point of much interest was shown in the *Lotus corniculatus*, by some called *Limnopsis japonica*, in flower. This is believed to be the first specimen that was introduced into this country. It has numerous slender roundish radical leaves, some of which bear filaments; all terminate in sharp thorny points; the stem is now about thirteen feet high, slender, with numerous, long narrow scales, arranged in spiral form, terminating in a spike thickly studded with innumerable twin flowers, one-third its length; the flowers are greenish white, petals recurved, stamens and pistils inserted. Two-thirds of the spike have yet to bloom, and the stem will elongate considerable as the blooming progresses.

There were also fine displays of vegetables; also dishes of Pears and Grapes.

The following are the reports of the committees:

The Committee on plants and flowers beg leave to report, that they have awarded the following premiums:

For the best display of plants in pots, \$3, to James Buist, gardener to James Dundas.

For the next best display of ditto, \$2, to Daniel Lahey, gardener to J. N. Dickson.

For the best bouquet, \$3, to Wm. Hall, gardener to Caleb Cope.

For the next best bouquet, \$2, to A. Henderson, gardener to W. Chancellor.

A special premium of \$1, for a bouquet, to John Sherwood.

For the best twelve named varieties of Chrysanthemums, \$3 to Benj. Gulliss, gardener to Jacob Snider, jr.

For the next best twelve ditto, \$2, to Archibald Henderson.

For the best American seedling Chrysanthemums, \$3, to Benj. Gulliss.

The Committee mention with pleasure, a fine specimen of *Littæa geminiflora* in flower, exhibited by John Sherwood, being the first, they believe, ever flowered in the country, for which they have awarded him a special premium of \$15.

They would also mention the general fine display of Chrysanthemums and Epiphyllums, the latter the best and finest specimens ever exhibited before the Society.

The Committee on Fruits report that they have examined the following in their department this evening, viz.

A dish of Pears, (Frederic of Wirtemberg,) deposited by I. B. Baxter.

A dish of Pears, by Benjamin Gulliss, gardener to Jacob Snider, jr.

A mammoth Apple from Virginia, by Caleb Cope.

A dish of luscious Grapes, White Muscat of Alexandria, by J. Sherwood.

A dish of winter Pears, by C. J. Macuen.

And your Committee recommend a premium of one dollar each to the contributors of Pears, and three dollars for the Grapes to John Sherwood.

The Committee on Vegetables report that they have awarded the following premiums, viz.

For the best celery, six stalks, \$3, to Wm. Sinton, gardener to G. W. Carpenter.

For the best Cauliflowers, five in number, \$3, to Albinus I. Felten.

For the best Broccoli, five in number, \$3, to Anthony Felten.

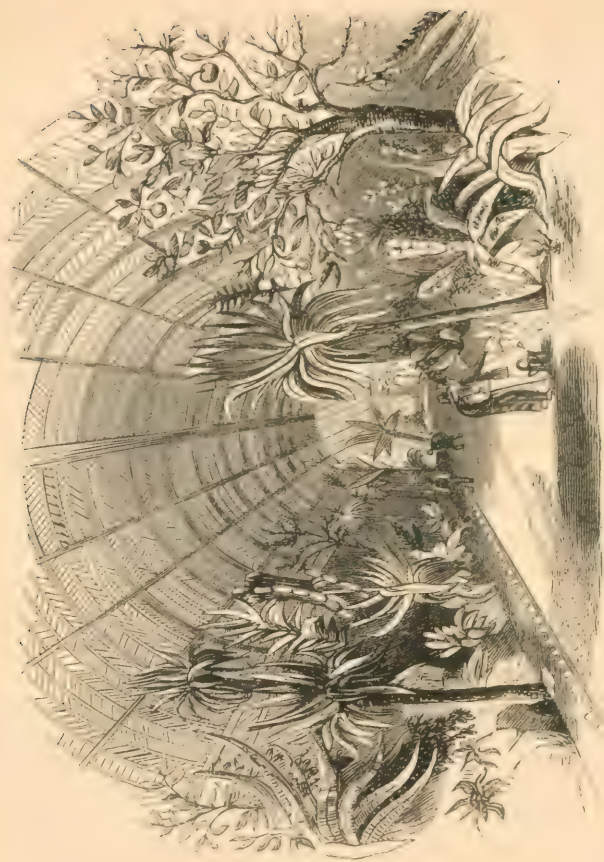
For the most interesting display of Vegetables, \$3, to Anthony Felten.

For the next ditto, \$2, to Daniel Lahey, gardener to J. N. Dickson. All of which is respectfully submitted.

Members elected.—Alfred S. Monson, M. D., President of the New-Haven Horticultural Society; George Gabriel, Sec. and Virgil M. Dow, M. D., one of the directors of the same; Ex-Governor Henry M. Edwards of New-Haven, and J. B. Mantel, of New-York, to honorary membership.

Joseph B. Zane, Camden, N. J.; Robert H. Thomas, Bohemia Manor, Md.; Eli K. Price, John Grey, Wm. J. Jenks, D. W. Eldridge, Dr. G. H. Beaumont, Dr. C. M. Griffiths, Dr. Thomas H. Yardley, Charles S. Wents, jr., J. R. Johnson, and Samuel Bough, to resident membership.

THO. P. JAMES, Sec.



INTERIOR OF THE GREAT CONSERVATORY AT CHATSWORTH

Horticulturalist, Jan. 1877.

THE
Horticulturist
AND
JOURNAL OF RURAL ART AND RURAL TASTE.

VOL. I.

JANUARY, 1847.

No. 7.

WHAT ONE WOULD DO IF HE WERE A DUKE, AND HAD HALF A MILLION A YEAR ? is a question which, if it could be audibly put by a magician or a fairy, as in the bygone days of wands and enchantments, would set all the restless and ambitious directly to air-castle-building. Visions of the enjoyment of great estates, grand palaces, galleries of pictures, richly stored libraries, stately gardens, and superb equipages, would no doubt quickly crowd upon the flushed imaginations of many even of our soberest readers. Each person would give an unlimited scope, in the ideal race of happiness, to his favorite hobby, which nothing but the actual trial would convince him that he could not ride better and more wisely than all the rest of his fellow-men.

We have had placed in our hands some clever and graphic notes of a visit to *Chatsworth*, the celebrated seat of the DUKE OF DEVONSHIRE. This place, as a highly artistical country residence, is admitted to stand alone even in England, and therefore in the world. To save our readers the trouble of perplexing their own wits to conjecture what they would do, if they were burdened or blessed with the expenditure of

the best ducal revenue in Great Britain, we beg leave to refer them to the notes which follow.

We may give a personal relish to the account, by observing that the DUKE OF DEVONSHIRE is a bachelor ; that it is a principle with him to expend the most of his enormous income on his estate, and that gardening is his passion. He is the President of the London Horticultural Society, where he is, among enthusiastic amateurs, the most enthusiastic of them all. He sends botanical collectors to the most distant and unexplored countries, in search of new plants at his own cost. He travels, with his head gardener, all over Europe, to examine the finest conservatories, and returns home to build one larger and loftier than them all. He goes to Italy, to study the effect of a ruined aqueduct, that he may copy it on a grand scale in the water-works at his private country-place ; and he takes down a whole village near the borders of his park, in order to improve and rebuild it in the most tasteful, comfortable and picturesque manner.

But it is not only in gardening, that the DUKE OF DEVONSHIRE displays his admirable

taste. Chatsworth is not less remarkable for the treasures of art collected within its walls. Its picture galleries, its library, its hall of sculpture, its Egyptian antiquities, its stores of plate, each is so remarkable in its way, that it would make a reputation for any place of less note. In his equipage, though often simple enough, the Duke has an individuality of his own, and we remember reading a description by that excellent judge of such matters, PRINCE PUCKLER MUSKAU, of the Duke's turn-out at Doncaster races—a coach with six horses and twelve outriders, which in point of taste and effect, eclipsed all competitors, even there.

But this is of little moment to our readers, most of whom, doubtless, relish more their *Maydukes*, than anecdotes of even the *Royal Dukes* themselves. But there is a certain satisfaction, even to the humble cultivator of a dozen trees or plants, or a little plot of ground, in feeling that his dearest hobby—gardening, is also the favorite resource of one of the wealthiest and most cultivated English nobles. It is, perhaps, doubtful whether the former does not gather with a stronger satisfaction, the few fruits and flowers so carefully watched and reared by his own hands, than the latter experiences in beholding the superb desserts of hot-house growth, which every day adorn his table, but which he does *not* know individually, and by heart—which others have reared for him—thinned, watered, and shaded—watched the sunny cheek redden, and the bloom deepen—without any of that strong personal interest which glads the heart of the possessor of a small, dearly-prized garden. He gains by the possession of the mighty whole, but he loses as much by losing the familiar interest in the inexhaustible little. Such is the divine nature of the principle of *compensation*!

But we must not moralize while our readers are impatient for the notes themselves.

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Notes taken at Chatsworth.—I know very well, that you will be glad to have my impressions of Chatsworth, and this, not chiefly because it is one of the most magnificent private residences in Europe, but because the Duke, who is its possessor, is, as you very well know, quite at the head of all the people who are *garden-mad*. In other words, horticulture is his hobby, and as his estate is a princely one, and as I think the days of such estates are numbered, even in the old world—even in aristocratic England, I am glad to have seen this capital example of what great individual wealth and taste can do, and does do, before it is too late. This is, I am pretty well convinced, the last century in which such a place as Chatsworth can be maintained.

The situation of the house at Chatsworth did not strike me as pleasantly as it might. This is because it is placed in a valley, and its magnitude and noble character would have been more becomingly displayed on a height, like Belvoir Castle. But the main part of the house was built by the first Duke in 1702, the days when snugness and shelter and warmth were ideas that too strongly had possession of both the clergy and nobles to allow them to think for a moment of any prospect, in comparison with them. For England, possibly they were right.

The style of the mansion, (I might very well call it *palace*,) is Palladian. It has been exceedingly enlarged and improved by the present Duke, chiefly in a very excellent Italian style.

In England, as you know, almost every thing is done in the most solid and substantial manner—as if, indeed, it were to last till doomsday. But even here, in this respect, Chatsworth is very remarkable.

There is nothing *sham*—no false stone—false marble—bronzed iron, or base metal covered with gold leaf! Every thing is just what it appears—the unquestionable stuff—and this gives a certain dignity and value to objects, that compel one's respect. In our own country, you know, there are so many *imitations*—from wooden-marble porticoes to gilt breast-pins, that it gives me now, when I think of it, a sort of uneasy feeling, as if the owner of such trumpery imitations *could not himself be genuine*. I felt when I was at Chatsworth, that the Duke of Devonshire was a real tangible duke.

My head is somewhat bewildered by the variety of notable things I have seen here. But there are two matters for which Chatsworth has such a towering fame, that I am at no loss what to begin with—I mean its *water-works*, and its *great conservatory*.

I have just told you that the house and grounds about it are in a valley. If there are disadvantages in this, there are also wonderful beauties which grow out of it. No one can doubt this, after seeing that magnificent jet, the *Emperor fountain*, as I have done to-day. It is, among fountains, what Niagara is among waterfalls—*it quite puts them out*.

The hills behind the house furnish the supply of water not only for this superb jet, but for the innumerable other water-works, of some of which I shall say a word presently.

The Emperor fountain is acknowledged to be the highest in the world. It took its name from its being completed about the time when the Emperor of Russia visited England a couple of years ago. The artificial reservoir, or lake, which supplies it, covers eight acres. It is about 380 feet above the level of the fountain, and you may get some notion of the extent of the water-works,

when I mention that the *pipe-laying* that has been going on here for all the various fountains, within the last five years, measures over two miles.

The Emperor fountain plays a *sublime* single jet, to the height of 267 feet! It quite takes one's breath away with its living beauty. It is projected upward with a force which seems almost supernatural, and like the fall on the American side at Niagara, comes down not like water, but a great shower of diamonds and *floating* precious stones. When there is a gentle breeze, it waves to and fro like a gigantic white plume. To see it to advantage then, one should take a stand at some distance in the park, so that its snowy form, richly variegated if the sun shines, is relieved by the dark back-ground of foliage. When the wind is high, it throws the spray to so great a distance, that they are obliged to shut off the head of water.

I must give you some more distinct idea of the superiority of the *Emperor*, by comparison with the other principal jets in the world.

	Height of jet.
The Emperor, at Chatsworth,	267 feet.
Wilhelm's höhe fountain, Hesse Cassel,	190 "
St. Cloud,	160 "
Russian fountain, Peterhoff,	120 "
Old fountain at Chatsworth.	94 "
Versailles,	90 "
Park fountain, New-York, (say)....	50 "

Next to the Emperor fountain in point of interest, is what is called the "Grand Cascade." This is a most striking and gigantic exhibition of this charming element pressed into the service of ornament merely. Many of my shrewd countrymen would, I know, shrug their shoulders at such "a waste of water power."

The "Grand Cascade" has long been a feature here. It consisted originally of a

water temple, placed on the side of a wooded hill, below which descended a flight of broad and massive stone steps, down which a flood of water poured with grand effect. This effect has been most admirably assisted by the taste of the present Duke, who has formed a grand and massive aqueduct of stone, which gives the impression that like the old Roman aqueducts, it originally carried the water across the valley, but having been broken or ruined near the water temple, pours down its whole volume of water a hundred feet, close behind this building, which thence rushes down the steps in the "Grand Cascade."

The idea, you will see, is a very bold one, and is worked out as only a man of large conception and gigantic means could have done it.

I could write you a volume almost, about the water-works here, if I thought you had patience to read it. There is no end to the varied and beautiful forms this lovely element is made to assume here, for the adornment of one country seat. One of the most pleasing and soothing effects, is felt on listening to the murmuring sound which it gives as it falls gently into snowy basins from the mouths of the marble lions in the great hall of the house. The only conceit that I did not approve, was the *Weeping Willow* fountain, a badly shaped copper tree, having none of the grace of its natural type—which pours down a shower on the unlucky pilgrim that rests under its shadow!

As I see my paper is fast filling up, I must hurry you off to the *Great Conservatory*.

Do not imagine this as an overgrown hot-house attached to the mansion, or as, in fact, resembling any thing greenhouse-like that is to be found elsewhere. It is quite an object by itself—and I was, therefore, pleased with its site, and the management of the locality.

The spot where it is situated, is about five minutes walk from the house. You pass along one of the most perfectly kept carriage roads, through the park, or rather through a wood—then under a striking and picturesque arch, and you come to a large opening in the midst of a noble wood of old trees—an opening such as I have seen in some of our stateliest forests, and which I am told, was actually cleared up to form the site for this building. This smooth area is surrounded by terraces, which form a fine frame-work of walks, from which the conservatory is seen to great advantage.

The Grand Conservatory itself—I cannot give you any better idea of it than by telling you that it is a glass structure which covers an acre of ground—that it is seventy feet high; and that the carriage road is continued directly through it, so that the Duke and his guests can drive through with a coach and four! The whole building is heated by hot water, the pipes to convey which measure *miles*. The temperature of various climates is imitated, and the collection of trees and plants embraces all that is fairest and loveliest of the vegetable world. Here there is a whole avenue of Bananas and Plantains lining one of the grand walks, and among them *Musa cavendishii* full of flowers, and laden with heavy masses of fruit. There, in an appropriate climate, is a charming grove of Oranges and Lemons. An *aquarium*, or pond of water, is the site for all the rare and curious water lilies and other aquatic plants of the tropics. And near by is a wild mass of rock-work, of Derbyshire spar, looking like a rich bank by a forest stream, where rare exotic ferns, lichens, and air plants, enjoy something as near as possible to their natural homes.*

* We borrow from the excellent London Horticultural Magazine a view of a small part of the interior of this conservatory, fig. 75.—Ed.

Over this hill of rock-work, is conducted a flight of steps; this leads you to a light gallery carried quite round the conservatory. Whence, as you may imagine, the eye of the spectator revels in the strangeness and novelty of the masses of oriental vegetation, not plants half-starved and dwarfed in pots, but trees nearly full-grown, and luxuriating with their roots in the warm soil—Palms, Dates and Bananas, developing almost all their native grandeur and oriental wildness!

I attempted to keep no notes of the many rare and interesting plants that were shown me here. *Amherstia nobilis* however I saw—a plant so rare, and so coveted, that a collector was sent by the Duke, specially to India for it! I believe it is the only plant in Europe. It is a native of the Burman Empire, where only *one tree* of it is yet known. It is said in its flowers and foliage to surpass any other tree in the world. The flowers are presented as offerings before the images of Buddha. All the amateurs, of course, are in agonies to see this plant bloom!

The appearance of the exterior of this immense glass pleasure-ground, is quite different from anything that I ever saw in the United States. It is not a smooth surface of glazed sashes—but a great curved surface, glazed in what is technically called the *ridge and furrow* system. The look it has at a distance is as if the whole roof had been nicely *crimped*, like the folds of a plaited ruffle. As you look at it from without, it is, on the whole, entirely satisfactory—massive and grand. Touching the inside—I was somewhat disappointed, as the wooden rafters are necessarily heavy. But this, I have no doubt, will be less apparent when the luxuriant vines and creepers have quite covered them. On my route through the grounds I was shown the tree which the Queen planted to commemorate her visit here two years

ago. It is doing well, is an object of more interest and solicitude, than any body but a *loyal* subject can well understand or conceive of, and I contrived to enrich my book of *mementos* with a leaf.

An *arboretum*, or collection of rare hardy trees, is quite the leading fashion in England—a very useful and instructive fashion, introduced I believe by Mr. Loudon. I may give you a glimpse of the extent of ornamental planting here, by stating that 50,000 *Rhododendrons* are now growing, all of which have been planted since Mr. Paxton, the present able manager, came here; some twelve years ago. In the range of the Arboretum I noticed the finest specimen of our great California Pines—*Abies Douglassii*, and *A. nobilis*, that I have any where seen. They are on the side of a rocky bank and will no doubt, soon become grand trees. I should say they are thirty feet high now. The *Norfolk Island Pine* is perfectly hardy here, the *Deodar Cedar* grows surprisingly fast, and dozens of arboricultural varieties that will not bear our winter seem quite acclimated here. Among the notabilities I remember seeing a *Fuchsia* on the “conservative wall,” that covered a space *twenty feet every way*; and a famous peach tree trained in the kitchen garden, which bears, or has borne, fifty dozen peaches in a season!

In all the points of a perfect country place of the first class, Chatsworth is complete. Forcing houses, without end, separate green houses for all kinds of rare plants, stables, cricket grounds, &c., out of doors—and the choicest collections in all departments of the fine arts within doors. About one hundred and forty men are constantly employed on the grounds near the house. In this way you see, a large income is turned to some account—giving occupation to quite a village of people.

Talking of a village, brings me to *Edensor*. This, at once, entirely captivated me. How shall I describe it to you? It is just such a village as magicians would build, if magicians were poets, landscape gardeners, and architects, as well as magicians! Believe me, it left an impression on my imagination, which the DUKE's palace, fountains, great conservatory, and miles of park, could not make. I must try to give you a peep of it through my eyes.

The entrance to the park at Chatsworth on one side, is called the Edensor gate. Formerly there was a dingy, forlorn village here—dirty, uncouth, repulsive, at all events below common-place. Very well, or very ill! you will say, and so thought the DUKE, and his ingenious architect, SIR JEFFREY WYATTVILLE.

The place where the old village stood, is now a smooth glade of green turf. A short distance from its *locale*, is a sweet little vale, or dell, only separated from the park on its widest side by belts of trees. Most beautifully and strikingly scattered through this vale, is the present village of Edensor. And such a village! Every house—and there are houses too of a great many sizes, from the smallest cottage up to the large comfortable farm-houses—every house is a gem of architectural beauty—quite a picture by itself. The greatest variety of style is to be found too—many in the Rural Gothic, always so pretty and becoming in the country—some in the heavier Old English—some in the pleasant Tuscan, or modern Italian. They are all most carefully built, many of stone, with every thing about them, gates, enclosures, &c., in perfect keeping. Then they are disposed so charmingly—here, a group in the smooth level, lower part of the vale—there, several with little hang-

ing terraces on the sides of the valley, and several of more picturesque character, occupying a bold rocky position on the background of the hill itself.

The cottages themselves, and I examined several, are fitted up with an attention to domestic comforts which would grace our best houses; nearly all have back-kitchens, pantries, and dairies. Behind these are large meadows, where each cottager has an enclosure for pasturing his cow or cows. Then there are certain goods which are provided for the village in common. First a complete village-school—then a village play-ground—then a village drying-ground, and lastly, a village fountain. The fountain, in point of beauty, entirely captivated me. It is useful, poetical, beautiful, in the highest degree, and I am sorry that I cannot send you a sketch of it. Besides this, the houses are well supplied with water, brought in pipes from the adjacent hill. Is not this a picture of care and interest manifested in fellow creatures dependant on another, which it does one good to contemplate? Since it is impossible for even the DUKE OF DEVONSHIRE to break down the fearful barrier of *caste*, which long custom, long accumulation, and long descent of property, have made fearfully imperative in England, he at least deserves hearty praise for the efforts he makes to add to the comforts and improve the condition of the many fellow beings who derive their daily support at his hands.

And now having got you out of the park gates, and having, as I find on looking over this, shown you not a tenth part of the thousand details that would interest you, because I fear your time and patience are as nearly exhausted as my space, I bid you again adieu.

A—.

On Transplanting Fruit Trees and the Care of Orchards.

BY L. C. EATON, OF PROVIDENCE, R. I.

WE do not expect to add any thing new upon this subject, to that which has already been written, but carelessness or ignorance still prevails to such extent, that some advantage may result by repeatedly noticing the directions which experienced cultivators have recommended.

Before transplanting trees, the ground should be well cultivated and in good condition. Deep ploughing is highly beneficial in promoting their growth and vigor. The holes should be dug at least three times as large as will admit the roots, extended in their natural position, and to the depth of twenty inches to two feet. The earth should be well mixed with a liberal allowance of well rotted manure and peat or muck, the whole so finely pulverized as to be admitted freely around the smallest roots. The bottom of the hole should be loosened up by the spade and the prepared earth filled in to the height at which it is proper to set the roots of the trees, and be sloped off in each direction, so as to form a slight mound or hillock. Pare off the wounded parts of the roots smoothly, to prevent canker or decay, and to enable them to heal over the sooner.

Place the tree upon the hillock and separate the roots, and extend them to their entire length; fill in the earth, observing that no cavities or hollows are left, and that the fibres are not crowded together. When the earth is entirely filled in, press it down with the foot, and "finish by making a slight hollow or basin to catch the rain and convey it to the roots." Shaking the tree to settle the earth, injures the smaller roots and lifts them from the correct position. It

has been frequently recommended to set the tree deeper than it formerly stood. We are not aware that any one has given a reason for so doing, or that any benefit can possibly result from it. Much injury is liable to be sustained by deep planting. The roots, buried too low beneath the surface, are deprived in a great measure of the influence of air, heat and moisture, and are "starved by the poverty of the soil." In preparing the soil, "a compost of two thirds muck or peat earth reduced by fermenting it for several months in a heap with one third barn yard manure," has been highly, and we believe most deservedly recommended. We had an opportunity a few years since of observing the beneficial effects of peat alone upon trees. We made several heaps of it in our orchard, of ten or fifteen loads each, not intending to make use of it immediately. The second summer after, we noticed that the trees nearest the heaps, though several feet distant, had grown much more vigorously that season than any others, and that the leaves were larger and of much deeper green. This difference of growth was observable at some distance, and when the attention of others was drawn to it, it was so marked that it was presumed the heaps must be in part composed of manure. When the heaps were removed, it was found that the roots had pushed up through the earth, and that the peat, in some places, was matted with their numerous small fibres. We have since used it in large quantities in cultivating trees, and with much advantage.

If any one intends to have his trees transplanted in the best manner, the only way

to insure it, is, to have the work done under his own eye, as it too often otherwise happens that those to whom you may give directions will neglect to follow them in some particular, either through a want of care or a belief that it is of no importance. Care and tact are required in taking up a tree properly, as well as in transplanting it; and we believe as much loss oftentimes occurs from the want of it in one instance as in the other. The work is too frequently regarded as mere drudgery, to be performed with as much expedition as possible; and is usually done by common laborers, wholly unskilled in the operation. The roots are torn from the body of the tree, or so split and mangled and curtailed in length, as either to destroy its life, or so far impair its strength and vigor, as to require years for its recovery.

The most thrifty, is liable to sustain the greatest damage, as its roots are apt to be larger and more numerous, or more deeply imbedded in the soil. We have seen trees taken up in this manner, some of which have been thereby rendered entirely worthless, so carefully packed for transportation, that not a branch, or even a twig, could receive the slightest injury. A portion of the labor would have been much more advantageous to the purchasers, if it had been expended in removing them properly. It is far preferable that the limbs should be mutilated rather than the roots; for though the tree may have a bad appearance when first transplanted, if the roots are well preserved it will soon recover from the injury. A nurseryman cannot at all times oversee this work, and in the press of business it may be carelessly performed without his knowledge and against his express directions. The purchaser would confer a benefit by informing him, whenever there is a serious cause of complaint; and it would not be

amiss in some cases, when an order is given, to make the request that care should be taken in removing the trees to preserve the roots as entire as practicable. If the trees could be removed with every root entire, there would be no necessity of shortening or trimming out the branches, any further than to shape the top of the tree in a correct form.

To have trees grow thriftily, and bear good crops of fruit, it is necessary that the soil should be kept in good condition by cultivation and frequent manuring. It should seldom be laid down to grass, and never with the view of taking the crop for more than one season or two at the most.

After an orchard has been planted eight or ten years, if the trees are vigorous, but little or nothing is gained by clearing the grass from around the tree three or four feet, and applying manure; for the small fibrous roots from which they derive their chief sustenance, grow at much greater distance; and it would then be more necessary to cultivate half of the intermediate space between the rows and equidistant, than any other part.

In the fruit garden, the spade, of course, only is to be used. The earth should be thoroughly trenched to the depth of twenty inches or two feet, the upper stratum, with a compost of manure and peat or muck, being first filled in, and the subsoil turned over and upon it. This work can be done with more advantage before the trees are transplanted.

In ploughing an orchard, use oxen in preference to horses. It is necessary that the trees should be so trimmed as to admit of the team passing beneath, without injury to the branches. Care should be taken not to cut or bruise the roots. By examining the furrows the depth at which they lie can often be detected, and the plough should

gradually run nearer the surface as a line of trees is approached. When the bark of the stems is accidentally bruised or knocked off, it is not in general best, at first to try any application. Pare off smoothly the edges of the wound; and if the albumen is untouched, or but slightly injured, it will soon heal up. We have known persons rub over the injured part with dirt or some other application, thereby entirely destroying the albumen, and making a wound permanent.

It is a great trial of temper and patience to have trees badly marred, and the work of ploughing should be trusted only to skilful hands.

It is a matter of surprise, that orchards are so productive, and that the supply of fruit indifferent in size and quality as much of it is, is so great, when we consider how many obstacles placed in her way, nature is obliged to overcome. Horticulture is beginning to be better understood, and the knowledge and information of experienced cultivators more highly appreciated.

In the state in which we reside, orchards, with but very few exceptions, are much neglected. They are mostly kept in grass, and not ploughed oftener than once in five or six years; and then not so much with a view of benefitting the trees, as to obtain profitable crops of hay.

In many instances, such of the trees as have survived an injudicious method of planting, and the depredations of cattle, are a prey to every species of vermin that can live upon them. The borers, caterpillars and lice, have undisputed possession. The trunks, surrounded by suckers, are covered with moss, and from the untrimmed tops, dead and cankered branches extend in every direction. In some neighborhoods, under the idea, or with the apology that stony soil is advantageous to their growth, orchards have been located upon rocky side hills, wholly inaccessible to the plough, and fit only for pasturage; and the dwarfish and stunted trees occasionally yield a small crop of miserable fruit. This is rather a sad description, but far from being overdrawn. We believe there is too much truth in a remark made by one of our most intelligent cultivators, that "if nine-tenths of our orchards should be cut down, and the labor and cultivation which they receive be expended upon the remaining tenth, more and better fruit would be raised.

We are happy to say that of late, attention has been more drawn to the cultivation of fruit, and that there is reason to expect a speedy progress in improvement.

L. C. EATON.

Providence, R. I., Nov. 18, 1846.

REMARKS ON ROSES—No. I.

BY DR. VALK, FLUSHING, L. I.

ALTHOUGH it is said, that "a Rose by any other name would smell as sweet," we are inclined to be sceptical even on this point, and very much doubt, could its name *be* changed, that it would either "smell as sweet," or long retain the pre-eminence so universally awarded it as the Queen of Flowers. Familiarity with a name so appropriate, and

so perfectly expressive of all those qualities known to belong to these floral genera, has invested them with properties too powerful for the most restless enthusiast to presume that even a hope might be indulged of calling them aught else than *Roses*—the very word being so perfect in itself, that it carries with it the association of all that is charming in

the floral kingdom. With other flowers, there are various tastes, but with the Rose, there is but one universal sentiment of admiration, which the lapse of ages has in no degree impaired, and it will go down to the latest period of time, unalterable.

As Roses then are, beyond all comparison, so fragrant, so varied, and so beautiful, every one who cultivates flowers, must wish to grow them either in small or large collections; and within a few years, so great has been the increase of families and varieties from seed, (the latter now amounting to several thousands,) that at the first glance it would not appear difficult to select a few or many, as may be desired. But a little reflection will show the entire fallacy of such an opinion, and the attempt to carry it out in practice will soon prove, that the amateur is beset with difficulties very trying to his patience, and very unsatisfactory in most cases when the effort is accomplished. It is very easy for nurserymen to multiply names, and to make distinctions *without* a difference, or with a difference so exceedingly slight, as to escape even close observation. It is also very easy to say that 1253 Roses "comprise a select list, embracing only the most beautiful and most estimable," and to talk about "critical investigation" in making it out. These Munchausen expressions are, or ought to be, taken for what they are worth, and mean no more than this—that as the Roses are grown to *sell*, a little "humbug" may bring customers. We know from experience, that in consequence of the family divisions so perseveringly and unnecessarily multiplied in almost every Rose catalogue, it is exceedingly difficult and discouraging to arrive at any definite conclusions, and we also know, that if the amateur will strike one thousand from the select list of 1253, he will have left about as many as are really worth growing.

Now, in our remarks on Roses, we wish it to be understood, that they are based on the combined writings of RIVERS, PAUL, LANE, GLENNY, GODWIN, WOOD, and several others, all of whom have said more or less upon the subject, and all practical men. Sifting the chaff from the wheat, it is not questioned that some points may be recognized as the ideas of one or another, nor have we thought it expedient to change their language, where it is sufficiently plain and direct. We wish to make this paper *useful*, and shall indulge the hope that it may prove so to many of the readers of the Horticulturist.

When, for the first time, the amateur determines to cultivate Roses, he finds himself at a loss with regard to the choice of varieties. Whether he grows a few or many, we presume it is his wish *to have the best*, if he can get them; and he goes to the catalogues for information, and to make his selection. Turning from one to another, he is perfectly amazed to find thousands classified by name, and hundreds as much alike as it is possible for them to be; yet choose he must, from these uncertain guides, unless assisted by the experience of others. We say then, *try the following*, which, although not as perfect a list as it is possible to make, will, nevertheless, afford very general satisfaction.

ROSA GALLICA. *Hardy.*

SELF-COLORED AND SHADED.

- Agnodice.* Crimson.
- Beauté parfaite.* Rose color.
- Boule d'Antonie.* Crimson-purple.
- Columella.* Deep rose; blush margin.
- Grandissima.* Brilliant crimson.
- Kean.* Very fine scarlet.
- Madame Damouveau.* Dark rose.
- Nelly.* Fine blush; fawn shaded.
- Orpheline de Juillet.* Very dark crimson.
- Phéde.* Fine flesh color.
- Triomphe de Saussens.* Crimson.
- Wellington.* Crimson-purple.

VARIEGATED FLOWERS.

- Aglaé Adanson.* Rose, spotted white.
- Duc de Bassano.* Red, marbled white.

Fontenelle. Rose, spotted red.
Fornarina. Rose, marbled white.
General Bertrand. Purple, crimson shaded.
Lavoisier. Spotted rose; variegated foliage.
Madelon Friquet. Rose, spotted white.
Modeste Guérin. Rose, mottled white.
New Village Maid. Red, white stripes.
Village Maid. Lilac, striped white.
Œillet parfait. White, rose, and red stripes.
Tricolor d'Orleans. Red, white stripes.
Triomphe de Beauté. Violet-crimson, veined.

Of these, both selfs and variegated, there are many novelties, yet not one in twenty are so good as the above.

HYBRID CHINESE ROSES. *Hardy*.

Brennus. Purplish-crimson.
George the 4th. Dark rose.
Grilony. Purplish-slate color.
Petit Pierre. Purplish-red.
Chenidolé. Vivid crimson.
Comtesse Lacépède. Pale silvery blush.
Duke of Devonshire. Lilac, striped white.
Hypocrate. Brilliant rose.
Lady Stuart. Silvery blush.
Madame Plantier. White, very fine.
Marjolin. Very black crimson.
Victor Hugo. Lilac rose.

The pretended origin of this class is mere assumption. All form excellent pillar roses, yet they are not placed among the climbers. The classification here is very defective.

HYBRID BOURBON ROSES. *Hardy*.

Recently separated from the preceding. Select

Belle de St. Cyr. Bright rose.
Charles Duval. The same.
Colonel Combes. Fine red, sometimes spotted.
Great Western. Deep crimson, very fine.
Lady Montgomery. Pale rose.
Paul Perras. Brilliant rose.
Richelieu. Very fine rose.
Sylvain. Bright crimson.

PROVENCE ROSES. *Hardy*.

Alphonse Maille. Purplish-red.
Cristata, or *Crested*. Blush; singular calyx.
Curled. Veined rose.
De Rennes. Silvery blush.
Duchesse. Large, rose.
Rachel. The same.
Reine de Provence. Pale lilac-rose.
Rochebardon. Deep rose.
Spotted. Crimson, spotted white.
Superb Striped Unique. White, striped pink.
Sylvain. Brilliant rose.
Triomphe d'Abbeville. Light vivid crimson.

DWARF PROVENCE ROSES. *Hardy*.

But one really worth growing; this is
Pompon de la Bourgogne. White, centre pink.

HYBRID PROVENCE ROSES. *Hardy*.

Blanchefleur. French white.
Christine de Pisan. Pink, beautifully spotted.
Cleopatra. Pale flesh-color.
Duchesse d'Orleans. Rose, pink centre.
 * *Emerance*. Pale lemon.
 * *Enchanteresse*. Very deep rose.
L'Ingenue. White buff centre.
 * *Laura*. Superb rosy blush.
La ville de Londres. Large, bright rose.
 * *La Volupté*. Deep rose.
Mrs. Rivers. Pale flesh-color.
 * *Semilasso*. Deep red, spotted.

The five marked with an asterisk are as perfect as any Roses that have yet been produced.

MOSS ROSES. *Hardy*.

Blush. Very fine.
Celina. Crimson; shining leaves.
Eclatante. Brilliant rose.
French Crimson. Very bright.
Lancel. Deep rose; very mossy.
Lancezeur. Deep crimson, veined.
Malvina. Fine lilac rose.
Mousseuse partout. Mossy calyx and leaves.
Mousseuse presque partout. Mossy leaves.
Prolifère. Mottled rose.
Prolific. Dwarf, distinct habit.
Perpetual Red. Deep rose.
Unique de Provence. White; in clusters.
White Bath. Occasionally striped.

These are distinct and fine. Many of the new ones are very good, but not better than the above.

ROSA ALBA. *Hardy*.

Of these we recommend

Attila. Fine rosy crimson.
Duc de Luxembourg. Flesh, rosy centre.
Fanny Somerson. Very fine rose.
Félicité Parmentier. Blush white, beautiful.
La Séduisante. Rosy blush.
Marie de Bourgogne. Pink, spotted flesh; beautiful.
Princesse de Lamballe. Pure white.
Queen of Denmark. Fine blush.

DAMASK ROSES. *Hardy*.

Of these, the best are

Bachelier. Fine rose; very large.
Coralie. White, rosy centre.
La Chérie. Flesh, pink centre.
La Ville de Bruxelles. Rose, fine foliage.
Lady Fitzgerald. Brilliant crimson.
Madame Hardy. Very fine white.
Semiramis. Rosy bronze.
La Soyeuse. Fine crimson.

SWEET BRIARS. *Hardy*.

Of these, select the

Double-margined Hip. White, pink shaded.
Riego. The most fragrant of Roses.

AUSTRIAN BRIARS. *Hardy.*

Double Blush. Salmon, buff centre.
Harrisonii. Fine deep yellow.
Persian Yellow. The best yellow grown.
William's Yellow. Very good.

Of the so called climbing Roses, take the following:

EVERGREEN ROSES. *A little tender.*

Adelaide d'Orleans. Pale rose.
Banksia-flora. Fine white.
Donna Maria. Fine white; very double.
Félicité Perpetuelle. Cream-color.
Myranthus ranunculacea. Delicate purple.

AYRSHIRE. *Hardy.*

Ayrshire Queen. Purple-crimson.
Dundee Rambler. White; pink edge.
Queen of the Belgians. Pure white.

MULTIFLORA. *Tender.*

Laure Davoust. Deep pink, very fine.
Grevillea. Red and blush; changeable.

BANKSIAN. *Tender.*

White and Yellow.

HYBRIDS. *Hardy.*

Astrolabe. Bright rose; beautiful.
The Garland. Pink, lilac and blush; changeable.

So far, we have only recommended selections from that class of Roses which bloom but once, in June and July, being the first division of most of the catalogues. The second division comprises those which are said to be "perpetual" in their flowering, and are more or less in bloom from June until November. Commencing with the

DAMASK PERPETUALS. *Hardy.*

We recommend but a few; these are

Antinous. Very fine crimson.
Belle Fabert. Brilliant rose.
Bernard. Very rich pink; highly scented.
Couronne de Beranger. Dark violet crimson.
Ebène. Very deep crimson.
Louis Phillipe. Fine dark purple.
Rose du Roi. Rich crimson.

We have not found this class to bloom more than once in a season.

HYBRID PERPETUALS. *Hardy.*

Of all Roses these are decidedly the most interesting, as they give, with good management, a constant succession of flowers until late in the fall. The amateur will derive

much pleasure from their cultivation, and they are richly deserving of all the care that may be given them. Where all are good, it is not so easy to be satisfied with a select number, yet we advise the purchaser to begin with

Auberon. Brilliant crimson; very fragrant.
Augustin Mouchélet. Fine rose, crimson centre.
Calliope. Bright cherry-red, streaked with white.
Clementine Duval. Very fine rose.
Dr. Marjolín. Deep carmine.
Dr. Marx. Rosy crimson.
Duchess of Sutherland. Bright mottled rose.
Lady Alice Peel. Superb deep pink.
La Reine. Superb large rose; magnificent.
Madame Laffay. Splendid rosy crimson.
Prince Albert. Dark velvety crimson.
** Princesse de Salerne.* Flesh tinged white, very distinct.
Rivers, (Laffay). Red, lilac tinged, fine.
William Jesse. Crimson, lilac-tinted.

The *Princesse de Salerne* is quite new, and also *La Renoncule*, a fine crimson, both seedlings of Monsieur MARGOTTIN.

[BOURBON ROSES. *Hardy.*

A very interesting class, of which the following are recommended:

Acidatie. Superb blush white.
Anne Béluze. Pale rose.
** Anaïs (new.)* Rich crimson.
** Belzunce (new.)* Fine rose and flesh color.
Brion. Fine velvety carmine.
Ceres. Bright rose.
Crimson Globe. Purplish crimson.
Desgaches. Bright rose.
Deuil du Duc d'Orleans. Black crimson.
Emile Courtier. Dark rose; very perfect.
Grand Capitaine. Velvety scarlet.
** Henry Lecocq.* Bright rose, shaded with carmine.
** Justine (Rousseau.)* Rosy carmine.
** Lychas (Guillot.)* Superb cherry-red.
Madame Lacharme. Blush white.
Madame Nerard. Delicate Blush.
Manteau de Jean d'Arc. White, tinged rose.
** Menoux.* Fine crimson, tinted scarlet.
** Prémices des Charpennes.* Rose, edged white.
Princess Clementine. Deep crimson and violet.
Queen. Fawn-colored rose.
Reine du Congrès. Delicate blush.
** Sepintarus.* Rose, violet shaded.
Souvenir de la Malmaison. Fine large, flesh.

Of these twenty-four, the eight marked are quite new, and probably not yet grown in our nurseries. The whole are very fine.

CHINA ROSES. *Rather tender.*

These generally give a profuse bloom until frost. The following twelve will give every satisfaction.

- Aimée Plantier.* Fawn color and blush.
- Alcine.* Purplish-rose.
- Archduke Charles.* Shaded rose and crimson.
- Boisnard.* Sulphur, yellow centre.
- Comtesse de Molré.* Fine dark crimson.
- Desfontaines.* Pure white and handsome.
- Eugene Beauharnais.* Bright amaranth.
- Madame Bureau.* Beautiful white.
- Milliez.* White, with a lemon tinge.
- Mrs. Bosanquet.* Flesh; resembles wax.
- Sully.* Pale rose and fawn shaded.
- Tancrede.* Brilliant red.

TEA SCENTED ROSES (CHINA.) *Tender.*

Of these there are a great many varieties named in the catalogues, not less than 112 to 120 in most of them. The amateur will find the following twenty about the best.

- Adam.* Fine large rose.
- Adeline Camille.* Superb white.
- Barbot.* Fawn-colored rose.
- Bougère.* Glossy bronzed rose.
- Burét.* Fine carmine; very sweet.
- Comte de Paris.* Pale rose.
- Deviensis.* Straw-color, buff centre.
- Elize Sauvage.* Yellow, orange centre.
- Josephine Malton.* Large white, yellow centre.
- Leonie Charmante.* Shaded rose; fringed petals.
- Moiré.* Cream color, rose shaded.
- Nitida.* Fine rose, yellowish centre.
- Pactolus.* Lemon, bright yellow centre.
- Pellonia.* White, blush centre.
- Pharaon.* Deep carmine.
- Saffrano.* Bright fawn-colored rose.
- Smithii.* Fine straw-color; a beautiful rose.
- Taglioni.* Splendid yellowish white.
- Triomphe de Luxembourg.* Large blush salmon.
- Yellow China.* Pale yellow.

NOISETTE ROSES. *Slight protection.*

- Aimée Vibert.* Pure white; very pretty.
- Boulogne.* Fine deep purple.
- Camellia rouge.* Rose color.
- Clara Wendel.* Fawn, changing to straw color.
- Chromatella.* Fine pale yellow.
- Comtesse de Tolosan.* White, rose centre.
- Elizabeth.* Blush white.
- Jaune Déspréz.* Bright fawn color.
- Lamarque.* Straw, lemon centre.
- Lamarque à cœur rouge.* White and fawn.
- Madame Jouvain.* Bright rose, centre buff.
- Solfaterre.* Bright sulphur.
- Vitellina.* White, orange centre.

MICROPHYLLA ROSES. *Hardy.*

- Grandiflora (Rivers.)* Fine rose.
- Rubra.* Fine deep red.
- Verdier.* Shaded salmon-rose.

These have delicate foliage, and are very interesting in the bud.

MACARTNEY ROSES. *Hardy.*

- Maria Leonida.* Fine white.
- Maria Leonida (scarlet.)* Bright red.

MUSK ROSES. *Slight protection.*

- Ranunculus.* White.
- Rivers' Musk.* Pink, tinged buff.

MINIATURE CHINA ROSES, LAWRENCIANAS. *Hardy.*

- Blush.*
- Caprice des Dames.* Pink.
- Dieu-donné.* Red.
- Gloire.* Crimson.
- Jenny.* Brilliant-rose.

Add to the preceding list, the two American climbing Roses, *Baltimore Belle* and *Queen of the Prairies*, a white and a fine pink, and the amateur will have a collection of 224 as good as any one could wish. It is not our purpose to say, that in our lists every Rose is unquestionably the best; but we do assert, that it would be difficult to make a better choice, when it is considered that but *one-tenth* the number enumerated in most catalogues is here retained. We have undoubtedly omitted many fine varieties, having done so because there is little use in having a great many so much alike as almost to defy the closest observation. For the mere name of the thing, more than fifteen hundred varieties may be cultivated, but time and experience will show that it is utterly useless. Among the so called *new* Roses yearly introduced, there are certainly a few very good; most of them are, however, no better than older ones, and many not half so fine as they are represented.

In our No. 2, the subject of Roses will be continued. WM. W. VALK, M. D.

Flushing, L. I., Dec. 1, 1816.

SOME FACTS ABOUT THE CURCULIO.

BY J. W. BISSELL, OF ROCHESTER.

MANY of the habits of this troublesome insect have been so well ascertained and so often made known, through the various agricultural and horticultural journals, that I do not consider it important to repeat them, but shall merely state a few facts that have passed under my observation during the past season, hoping the results will induce others to join in reducing the number of these depredators.

The month of May last, was very warm and dry, and of course favorable for hatching eggs laid the year previous; consequently, not only curculios but all other insects have been abundant during the summer. The Curculio having last year destroyed all our (Bissell & Hooker's) Plums, Cherries and Nectarines, I determined this season to save at least a portion, and succeeded so well that our plum trees were overloaded and needed to be relieved of part of their burden; upon most of the Cherry trees the fruit was good, though we lost all our Nectarines except two. For this latter fruit, these insects have a great partiality, and I found them on the trees long after they had disappeared from all others. I never found more than two, and seldom more than one egg in any other fruit than a Nectarine; in a single one of those I have sometimes observed a dozen, and have seen three Curculios laying eggs at one time in a single specimen.

By making each day last spring a careful examination, I ascertained that the Curculios commenced their depredations upon Plums first, and on the first day of their appearance, (May 20,) I killed twenty. For the space of nearly a month from that time, the trees were thoroughly shaken almost

every day, and occasionally until the 15th of July, though in the latter part of the time very few were caught. During the first month, the number killed from fifty trees sometimes amounted to 500 each day; in July hardly a dozen. The manner of taking them was effectual, though somewhat laborious: a large white cloth was spread under the tree, reaching as far as the foliage extended; the body and the larger branches were then repeatedly jarred with a pole about ten feet long, the end of which was covered with thick cloth, and an old india rubber shoe to prevent injury to the bark, and the insects as they fell were killed with the fingers. Shaking the tree or the branches violently with the hand, stopped the operations of the Curculio for a short time, but they would not quit their hold; to make them do that, required the sudden jar, such as was given by the pole.

Some trees I syringed with strong tobacco water and whale oil soap suds several times, wetting every part, even of the leaves, with these compounds, so that the odor thereof was perceptible at a distance of 20 feet, without producing any effect, for the Curculio seemed to be as numerous on these trees after washing as before. I have seen one lay an egg in a plum, the skin of which was so coated with these washes as to be exceedingly nauseous to the taste. I am satisfied that a war of extermination, not of prevention, will be our only hope. These sickening smells incommoded only ourselves. I thought that the tobacco water or soap suds might perhaps kill the eggs already laid, or prevent the young worm from eating into the fruit; but I

could see no such result, and found that the worm would live after having been immersed in tobacco water so strong as to be as dark as port wine.

About two days after the egg is laid, the skin above it becomes brown, and the egg may be easily extracted with the finger nail or the point of a knife. I operated in that manner upon the plums on one branch of a tree, and saved all of them, without apparent injury to any.

Fruit ordinarily falls about a fortnight after it is stung, and the grub soon afterwards makes his way into the ground, but if the egg is laid after the stone has become hard, the fruit does not often drop, and the tenant retains possession, causing the decay of the side where he is at work. In all cases, the fallen fruit should be destroyed as soon as possible. When Morello cherries are stung after the stone has hardened, the skin and pulp on that side dry, and crush the worm. I examined a great number, and found that not one had escaped. This is not the case with other cherries, as abundant experience while eating them has proved. Generally these insects appear to know when the stones become hard, and the fruit unfit receptacles for their eggs; they then desert such trees and seek others, attacking the Peach last. The young Peach having a peculiarly woolly covering, the Curculio often lays

her eggs in the stem, and the grub finds its way through that into the fruit.

The beetle, when it falls upon the sheet beneath the tree, rarely attempts to fly, preferring to use the legs rather than the wings, yet it navigates in search of fruit, and often makes its appearance upon fruit trees, distant from others, and stings all the fruit the first year any is produced. An observing horticulturist, near this city, who is indefatigable in his war upon all insects, and whose fruit yard is nearly a mile distant from any other, informs me that he finds the Curculio more numerous in his grounds, and especially upon the westerly trees, immediately after a west wind. Across the river opposite him, and extending west for many miles, is a road well settled, abounding with fruit, and especially with Plum trees. From that source must come these insects, assisted in their flight by the prevailing winds. That they do not fly very high above the ground, is proved by building tight board fences ten or fifteen feet high around single trees or fruit yards; those trees within will not be visited, while those without will sometimes be entirely stripped. I have heard this summer of several persons who had tried this plan with entire success; yet there is no doubt that the cheapest and most effectual way is to shake them off, a troublesome operation, but one that pays well in the end. J. W. B.

Remarks on Transplanting Fruit Trees in the Spring and Autumn.

By S. G. PERKINS, Esq., BOSTON, MASS.

FIRST prepare the ground where they are to be put, so that water will not remain on or near the roots. Examine the roots of the tree before planting, and *cut out* all rotten or defective roots, and *cut in* (shorten) all that are bruised or otherwise injured, to sound wood above the wound. Be careful not to plant too deep, as this may be fatal to your tree.

If the tree does not put out shoots in the

spring, at the usual time, or as soon as others do that were planted at the same time, give it one good watering at the roots, and no more while it remains in a dormant state; but if the bark remains fresh, or does not turn black, *wash the head and body* with a water pot or syringe every evening at sundown, until it begins to shoot or grow, when you may cease watering the head, and water the roots if required. I have had trees to remain until the last of July without putting out a leaf or shoot of any kind, and after that become as fine specimens as any in my garden.

No manure should be put to fruit trees, except it be a little vegetable manure, quite rotten, and that mixed with the earth that is to cover the roots. The question is frequently asked, whether it be best to plant fruit trees in the spring or autumn. This, in this latitude, must depend on the *soil* into which they are to be put. If the soil be a wet, clayey one, it is best to plant in the spring; but if it be a light, gravelly soil, the autumn is preferable, because you gain four or five weeks in the growth of your plant in the spring.

If water be allowed to remain about the roots of trees that are recently planted, and are not growing, it will probably rot them by becoming stagnant and putrid. Trees should be planted therefore, so that the water will run over and off the roots, which is all they require to afford them nourishment.

Watering the head and body of a tree that is tardy in putting forth its shoots, is the safest, and indeed the only sure mode of bringing them out, while a continued watering of the roots is almost sure destruction to them.

Trees planted on a south wall or fence, that do not put out shoots in due season,

should be covered for several hours, when the sun is out, if the weather be warm. The leaves may be considered a sort of suction pump, which draws up the moisture from its roots and produces its increased growth, whereas a tree without leaves, and that is not already attached to the ground, has no means of carrying off the moisture from the roots. For example, if two branches of equal size and weight, the one with leaves and the other without them, are placed in vessels containing an equal quantity of water, and exposed to the sun, the one having leaves will take up the greater part of the liquid, while the other will consume comparatively little.

Some ten years ago, I imported from Paris two hundred and ten Pear trees on Quince stocks, whose roots, on their arrival, I found to be entirely black and dead. I shaved off with a drawing knife all the roots down to the stump. These I planted in trenches, tying them to cross-bars to keep them firm, and then filled up the trench with good soil. The heads and bodies of these trees were regularly washed in dry weather until they began to sprout, which most of them did in abundance during the summer, and I finally saved out of the whole number, one hundred and seventy four, which became as well rooted and as good trees as any in my garden.

This has happened more than once. Three or four years ago, I imported among other trees, twenty Plum trees, from six to seven feet high, the heads of which had been budded the previous year in France. These buds had grown from nine to twelve inches long, and were perfectly fresh when they arrived; but the roots on examination were found entirely dead. Two of these I gave away. One was good for nothing, and the other seventeen I planted in my

garden, having cut out all the roots that had fibres, they being entirely dead. One of my men said I might as well plant my walking stick. Sixteen of these are now flourishing trees, well grown and well rooted, new roots being induced by means of washing the upper part of the tree.

S. G. PERKINS.

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REMARKS.—The foregoing will please such of our readers as like plain, sensible advice, from a thoroughly practical man. We have ourselves seen with great surprise and satisfaction the trees referred to as having been so successfully transplanted by Mr. PER-

KINS, under what were the most unfavorable circumstances. The great advantage of the mode he practices, of *watering the bark*, and not watering the roots of a tree, in a half dormant state, our correspondent thoroughly convinced us of in his own garden. Our readers are solicited to put in practice the invaluable advice he gives them. There is no doubt, that half the trees that die annually from the ignorance of transplanters, perish from a mistaken notion of deluging their roots with water daily, when their fibres are so feeble as to dread it as much as a patient afflicted with hydrophobia.—ED.

Remarks on a Supposed Heavenly Manna.

TRANSLATED FROM THE REVUE HORTICOLE, BY C. E. D.

AT one of the recent sittings of the Academy of Sciences, M. TIZENHAUZ announced that he had observed, on the third of last April, in the district of Jenischehir, government of Wilna, and on his own grounds, a species of rain of *Manna*, of a greyish-white in color, rather hard, irregular in form, inodorous and insipid, in a layer of three or four inches in thickness. This phenomenon is by no means new. It is produced by a lichen, *Lecanora esculenta*, often carried to a great distance by the wind during storms. It was observed by PALLAS,* towards the close of the last century, in the mountainous, arid, and calcareous portions of the great desert of Tartary. M. EVERSMAHN† collected it in the Steppe of the Kirghiz, to the north of the Caspian Sea, where it is called *Semljenoichleb*. M. LEDEBOUR has observed it in the same countries, but chiefly towards

those which border on Altaï. PARROT and AUCHER-ELOI* have collected it in Persia. It has been brought lately from Constantinople by an architect by the name of BIL-EZIKDJI, who had observed it in Anatolia in 1845. Dr. LÉVEILLÉ† recognised and gathered it in Crimea. Recently Dr. GUYON identified it in Algeria; and if carefully sought for, it will probably be found in the south of Europe—in Spain.

Those travellers who have seen this lichen in its proper sites, have never found any particle of it attached to any support whatever; it is quite detached, and rolls on the the soil. It is found, says M. LÉVEILLÉ, in irregular-shaped bodies, varying in size, from that of a pin's head to a pea or small nut. PARROT, EVERSMAHN, and AUCHER-ELOI, explain its appearance by its being detached by waterspouts, or from the sur-

* PALLAS, *Voyage*, Vol. III., p. 760.

† *Acad. Nat. Cur.* Vol. XV. p. 350.

* AUCHER-LOI. *Relat. d'un Voy. en Orient.*, Vol. II., p. 399.

† *Voyage du Comte Anat. de Demidoff*, Vol. II. p. 139.

face of the rocks by violent tempests, which transport it to a great distance, and throw it on the ground, where it continues to vegetate. This opinion is also held by M. LÉVEILLÉ, a skilful observer, who has found the remains of several other species of lichens, mixed with the *Lecanora*, upon which he has remarked a kind of scar or point of connection. PARROT's opinion, etc. agrees with the greater part of the accounts concerning it.

In Persia, this lichen has been observed forming layers of 0".12 to 0".13 in thickness. AUCHER-ÉLOI sent with his specimens the following note: In 1829, during the war between Persia and Russia, there was a great famine in Oromia, southwest of the Caspian. One day, during a violent wind, the surface of the country was covered by a lichen, which *fell from heaven*. The sheep immediately attacked and devoured it eagerly; which suggested to the inhabitants the idea of reducing it to flour, and making bread of it, which was found to be good and very nourishing. The Persians pronounced it a miracle, and failed not to attribute it to ALLAH. The country people affirm that they never saw this lichen before nor after that time. It is probable that it was brought from high mountains, and cast upon the plains by a tempest.

An identical fact is given in latter years: At the time of the siege of Hérat, the papers mentioned a hail of manna, which fell upon the city, and served as food for the inhabitants. Hérat is situated nearly 876 feet above the level of the sea.

But what are the original localities of this singular plant? Here is, on this subject, a translation which serves as a preamble to the essay of EVERSMAAN: "It is evident that creating nature begins her work by outlines, and gradually advances to su-

perior formations. I shall give briefly a singular example of this truth, which I observed in the vast solitudes which extend to the east of the Caspian sea. The deserts of Kirghiz, which belong to the most recently formed strata of our globe, and whose late period is proved by rocky formations which still remain, already produce a growth of lichen, which lays the foundation of a more fertile subsequent vegetable growth. Indeed, wherever the soil does not consist of pure sand, but contains a mixture of saline earth, the surface of the ground is there covered with lichen, which, by its decomposition, forms a new soil, fitted to nourish more perfect plants."

Notwithstanding its extreme whiteness and starch-like appearance, the substance of *Lecanora esculenta* does not become blue by the action of iodine, and exhibits none of the distinguishing properties of fecula or flour. Besides, this lichen is not the only one containing nourishment; that of Iceland, *Cetraria islandica*, the Iceland Moss, is eaten daily in its native country, and M. GAIMAND has seen it made into gruel, by bruising and boiling it in milk or water.*

A chemical analysis gives, for one hundred parts of *Lecanora*:

- 1.75 of soft resinous matter, of a bitter taste, soluble in ether, and containing *chlorophylle*, (the green matter of leaves,) of a yellowish green.
- 1.75 of soft resinous matter, insipid, inodorous, and soluble in alcohol.
- 1.00 of a bitter substance, soluble in water and alcohol.
- 2.50 of inuline.
- 23.00 of gelatine.
- 2.25 of the remains of lichen.
- 65.91 of oxalate of lime.
- 99.61

* The large black lichen which covers the rocks on the summits of the mountains in our Hudson Highlands, is a species of *Gyrophora*, popularly called *Rock Tripe*. Though

Since the question of *manna falling from heaven* has been discussed, and many persons have been inclined to refer this phenomenon to that spoken of in Scripture, I do not think it irrelevant to repeat here the recent observations of Messrs. EHRENBURG and BOVÉ. In the opinion of these travelers, the *manna of the Hebrews* is the product of a Tamarisk, *Tamarix mannifera*, very nearly allied to *T. indica*. This tree, which is very abundant throughout Arabia, is found on Sinai, 900 feet above the level of the sea. There, where the Date tree is only a shrub, it produces a sweet and very abundant exudation, which is used by the Arabs. "The country of Ouadi-el-Cheik," says BOVÉ,* "is almost entirely occupied by the *Manna Tamarisk*. I have seen women and children busy in collecting this substance, which flowed from the branches of these trees. The Arabs clarify the manna

by dissolving it in warm water, and making a syrup, of which the taste is equal to the best honey."

The production of the *Hebrew manna* was for some time incorrectly attributed to an herbaceous plant of the Leguminaceous family, *Alhagi maurorum*. Mr. LINDLEY has recently pointed out an oak, *Quercus mannifera*, from the leaves of which also drops a sweet substance, which seems to have been mentioned under the name *Chelber*, by OLIVIER. This name, applied by the hordes of Korassan and Little Tartary to a nutritious substance which falls on the ground, it is easy to see, approaches very nearly to that of *Semljenoï-Chleb*, by which name the natives of the Kirghiz designate the *Lecanora esculenta*, sent them from heaven, from time to time, in a manner so miraculous.

J. DECAISNE.

Revue Horticole, Paris, Oct. 1846.

ACCOUNT OF THE ORIGIN OF THE BALDWIN APPLE.

BY B. V. FRENCH, VICE-PRESIDENT OF THE MASS. HORT. SOCIETY.

THIS justly esteemed fruit originated in Wilmington, near Boston, in that part which now makes a portion of the new town of Sommerville, in the county of Middlesex, Massachusetts. The original tree grew on the farm of a Mr. BUTTERS, and was known for a time as the Butters apple. This tree was frequented and pecked by the woodpeckers, and Mr. Butters called it the *Woodpecker apple*, which was soon abbreviated to the Pecker apple. My trees,

which I set out twenty-eight years since, are registered "Peckers." This fruit must have been known about a century. Orchards were propagated from Mr. BUTTERS' tree, pretty freely, about seventy-five years since, by Dr. JABEZ BROWN, of Wilmington, and COL. BALDWIN, of Woburn, and their sons, to whom the public are principally indebted for bringing the fruit so generally into notice. From Col. B. and his family, who introduced it largely into public notice, it took the name of "*Baldwin*," by which the fruit is now every where known.

I am informed that Major SAMUEL JAKUES, of Sommerville, eminent as an agriculturist, breeder, and horticulturist, as well as a

hard as leather in dry weather, it becomes soft and nutritious when boiled. The Canadian hunters have at times been forced to subsist upon it. The Reindeer Moss, *Cenomyce rangiferina*, is a lichen of great value as food for this animal in extreme northern and sterile regions.—ED. HORT.

* *Voy. au Sinai, Ann. Sc. Nat.*, 2d serie, 1834, p. 167.

public benefactor of his age, now owns that part of the farm on which the original Baldwin tree grew, and has placed a monument on the site where it once flourished.

It has been thought by some, that there were three varieties of the Baldwin, as some fruited annually, some every odd numerical year, and some on the even years, which (as this, 1846) is the general fruiting year. But on a careful investigation, they are found to be identical.

The tree with us, for thriftiness, for hardness, for fine form, and vigorous strength,—for its abundant bearing and the beauty and long keeping of its fruit, is placed at the head of all other New England winter apples. The fruit is always fair, above medium size, of a fine rich red and yellow color. The flesh nearly tender; in color, yellowish, rich, juicy and fine flavored; excellent for the table or cooking, and is in use from November till May.

I have given the Baldwin a thorough trial

in my own orchard. This year is the bearing year with me, and I have taken *ninety barrels* of Baldwins from trees planted twenty-eight years ago in grass land, and kept in that state ever since.

You may judge how superior to the Newtown pippin, this apple is for New England orchard culture, when I inform you, that from four yellow Newtown pippin trees, in the same orchard, planted at the same time with the Baldwins, I gathered only one and a half barrels of apples; while from two Baldwins adjoining, in the same row, I took seven barrels.

The Baldwin is in Boston preferred to any other variety for shipping. I have been credibly informed, that one person, engaged in shipping fruit from this port, has this autumn purchased twelve hundred barrels of Baldwins for this purpose.

Yours, with respect,

BENJ. V. FRENCH.

Mount Monatiquot, Braintree, Mass., Nov., 1846.

REMARKABLE MEXICAN TREE.

THAT Mexico abounds with trees and plants of the most beautiful and extraordinary character, we are already well aware. Our green-houses and gardens bear ample testimony to this fact, in the novel and curious *Cacti*, so repulsive and forbidding in their stems, and so lovely and brilliant in their blossoms; in the celebrated *Manita*, or Hand Flower (*Cheirostemon*); the curious and beautiful *Achimenes*, now so popular in our green-houses; the gaudy and striking Tiger Flowers (*Tigridia*), that adorn our borders in summer; and a great number of species that are less known except to industrious collectors.

Still Mexico is comparatively an unexplored country—for though several Euro-

pean botanists have travelled through it, and enriched the gardens and herbariums of their native lands with portions of its unique flora, yet there are whole districts that have never been in the least explored by any scientific eye—vast tangled forests, full of strange air-plants, and festoons of wild and gorgeous climbers—deep valleys, where the climate and vegetation are those of the sultriest tropics—and wide, arid plains, studded with endless forms of succulent plants, bristling defiance!

Now that our countrymen are obtaining a foothold in Mexico, we may justly believe that, little by little, its most interesting vegetable productions will be introduced to our notice. It will be remembered that,

though Mexico is in a very warm latitude, yet her lofty mountain plains are in a temperature by no means tropical—indeed some of them scarcely at all warmer than many parts of the northern states. We may, therefore, safely hope that many of the interesting trees and plants of the mountainous districts of Mexico will be, at no very distant day, naturalized in our own gardens.

One of the most striking trees of Mexico is the *Fourcroya*, *F. longæva*. We give an engraving of it, showing its appearance when in bloom, from the Arboretum Britannicum, whence also we gather the following account of it.

Fourcroya longæva is found on the summit of Mount Tanga, in the province of Oaxaca, in Mexico, at an elevation of ten thousand feet above the level of the sea, growing in declivities along with oaks and arbutuses. It was first discovered, and carried to Europe in 1828, by BARON KARWINSKI, and was afterwards introduced into England by M. FRANCIS RAUCH in 1833.

It is a very splendid tree, with a straight cylindrical trunk, forty to fifty feet high, and from twelve to eighteen inches in diameter, surmounted by a flower stem from thirty six to forty feet high. It flowers in May, and ripens its fruit in the following winter.

BARON KARWINSKI stated, that where he found the *Fourcroya*, the ground was covered with snow and ice. There is, therefore, little doubt, as Mr. LOUDON has remarked, that it will prove entirely hardy in the climate of London.

If the accounts of the natives of Oaxaca, are to be relied upon, this tree bids fair to distance the well known Century Plant, *Agave americana*, in reputation for tardiness in blooming. "It is of such remarkably



Fig. 76. The Mexican *Fourcroya*

slow growth in its native habitats, that the *inhabitants say it flowers only once in four hundred years!*"

Only seven plants of this Fourcroya, we learn, have as yet been introduced into Eng- land—those by M. RAUCH. One of these was purchased by the DUKE OF DEVONSHIRE, and the rest by the celebrated exotic nurserymen, MESSRS. LODDIGES of London. They commanded five guineas each.

CURE OF THE YELLOWS IN PEACH TREES.

BY WM. R. PRINCE, FLUSHING, L. I.

THERE have been almost as many *infallible* cures announced for this malady as for consumption, and other diseases of the human frame; but there is no truth in any of them. No tree affected by the Yellows, has ever been resuscitated, so far as my knowledge extends; and no plausible remedy has been announced. Cutting off the tree at the ground, or above it, amounts to nothing, as *the sap is diseased*, (which is the blood of the vegetable kingdom,) and consequently every portion of the tree, root and branch, is contaminated. If the mere bud of the diseased tree is inserted in any part of the most healthy stock that may be selected, the latter becomes diseased, and will, at the ensuing season, if not sooner, present all the symptoms which so fully distinguish the Yellows. Even if an incision is made into the sappy wood of a diseased tree, and the knife used is then inserted into a healthy tree, sufficiently to blend the sap of the two, the latter becomes thenceforth diseased. Its operation is most virulent, and I know of none equally so in any other class of fruit trees.

Formerly, it was the common saying about New-York, that the Yellows was attributable solely to the proximity of the Lombardy Poplar, and that the introduction of that tree formed the fatal era for the introduction of the Yellows, and was the cause of its perpetuity. A general crusade was thenceforth carried into operation against the poor and unconscious Poplars, until almost every one was exterminated; and thus a tree of peculiarly stately and unique growth, and which forms a striking and pleasing contrast to others in landscape scenery, became almost banished from our land. But even this did not "stay the plague," for the disease continued to traverse the peach orchards of several states, until an almost universal extermination took place, and any one who will visit the once splendid peach orchards in various parts of New-Jersey, will be struck by the desolate aspect of immense plantations of dead trees, with only here and there a sprig of verdure amid the mighty mass. In this Island the malady became exhausted some years since, by the utter destruction of the old orchards, and the determination not to plant new ones until it became extinct. This course proved most fortunate, as the disease has been for years banished from Long-Island, and now new orchards are springing up every where, and every garden is becoming re-adorned with the finest varieties of the Peach, "redolent with health."

The nurseries of Long Island abound with trees of all the varieties, in a state of perfect and natural vigor, and perhaps I may be excused for a little egotism and interested feeling, when I state that there is not a collection of the varieties of the Peach in

any country of the earth, or in all other countries united, that can compare with the assortment now concentrated on this island.

We have all the finest varieties of France, Italy and England, and of its birth-place, Persia; and we have more than fifty highly estimable varieties, which have originated in the different states of our own Union.

Within the last month, the writer was applied to by a most intelligent connoisseur of the Peach, residing in England, to send him a collection of fifty American peaches; and such an assortment was selected and sent out to him as will, no doubt, when he shall regale his friends with their fruits, bid them render the same glowing tribute to our pomological productions, that the God

of Nature seems to have intended should apply to every object connected with our country.

In conclusion, I will simply remark, that the Yellows is never imbibed by any Peach tree until it has blossomed, (incisions of course excepted,) and therefore any person who obtains peach trees one year grown from the inoculation, cannot fail to have healthy trees, as they do not blossom until the second year.* This is a very important point, and another one is, that trees of this age will form a full bearing orchard, quite as soon as if they were a year older, and thus one year additional will be gained in the duration of the orchard. W. R. PRINCE.

Flushing, Dec. 1846.

A LEAF FROM AN OLD JOURNAL.

BY EVELYN, ON THE HUDSON.

It was early in the morning, on the 1st July, 18—, that we were apprised that the ship was close in on the Irish coast. I hurried to the deck, and found that we had in view two bluff, isolated rocks, known in the chart as the "Bull and Cow," whose wall-ed, weather-beaten sides receive the shock and heavy surge of the long-swept waves of the Atlantic.

As we coasted along, to double Cape Clear, the fishermen put out in their boats to intercept us, and whilst bartering with the sailors, they gave us rich specimens of their brogue and blarney. One, who seemed anxious to propitiate our Captain, stood up as he approached and exclaimed, "Och! your honor, and I thought it was you!" As we sailed up St. George's Channel, the Welch Mountains lifted their azure heads into the prospect; and, being of Dr. Johnson's opinion, that "no one should go to sea who

can make interest to get into goal, where confinement is safer and not more irksome," I escaped from our good ship by Holyhead into North Wales, and soon had good reasons to congratulate myself on the change, in the villa-like Hotel of the *Pennryn Arms Inn*, near Bangor. The Inns of England are proverbial for cleanliness and quiet comfort, and in stepping from the well kept rooms of this Inn upon its sweet lawn, which commands an extensive view of Beaumaris Bay, I felt as if domesticated at an elegant villa. The scenery about Bangor is highly interesting, particularly the beautiful

* Except the stock on which it is budded is *constitutionally* diseased. We have pretty well satisfied ourselves that this has been the case—that the elements of the Yellows sometimes lie dormant in the kernel. When this is the case, unless the soil is such as to give an unusual stimulus to the health of the plant produced, the yellows will, sooner or later, develop itself. We agree with Mr. PRINCE, that the Yellows is fast disappearing, and trust, in a few years, as good cultivation becomes general, it will entirely disappear.—ED.

Bay of Beaumaris, with the remains of the old Castle on one side and the bold mountain of Penmaen-Mour on the other. It is said that a reverend gentleman once remarked, that "if he were Bishop of Bangor, the only *translation* he should covet would be thence to Heaven." From my comfortable head-quarters, I made excursions to many interesting objects in the vicinity.

I scaled the top of Snowdon, which, though only 4,000 feet high (the height of *Round-Top* in the Kaatskill range, and the Peaks of Otter of Virginia,) is generally covered with clouds. Unlike our American mountains, Snowdon, &c., are denuded of trees, and I found sheep grazing along its sides, even ranging among the mosses and rocks to the top, bleached by the drifting vapors.

The views which were disclosed, as the clouds floated, veil-like, past me on the summit, were extensive and highly interesting. The crater-like tops of the contiguous mountains, with thirty lakelets at different elevations, contrast with the cultivated vales below, and the sparkling waters of the adjacent seas.

The road through Wales to Holyhead is a national road, constructed admirably, and at a great expense, by the British government, for the *Irish mail*; England being solicitous to receive *daily accounts* of the fitful humors of the sister Island, (*captive* but not *united* Ireland)—the Straits of Menai being crossed by a magnificent chain bridge, 100 feet high and 600 feet span. It is said that the straining of heavy chains to the required tension, was the critical operation in the structure, and that Telford, the engineer, (whose professional reputation was at stake) was found *praying* for success by the messenger who announced the achievement to him.

The Welsh Harpers, who travel from town to town, with their harps strapped upon their shoulders, interested me much. They are usually aged and blind, and though they are, for a few shillings, ready to play the airs of other nations, yet I thought I observed more enthusiasm in playing those of their own wild country.

I visited an extensively wrought quarry of slate, which is not only split and cut to the sizes for house-roofs, but it is used for mantel-pieces, tables, tomb-stones, having the appearance of black marble.

The road from Bangor to Chester, through the lovely vale of Langollen, holds out many attractions to the tourist. The savage looking mountains, with their "foaming floods," and here and there the ruins of a castle, erected to subjugate the Welsh, contrast finely with the cultivated vales, often containing the remains of a Chapel, or of some religious house. I diverged a little from the road, to visit a very interesting ruin. It is of an old Chapel, the roof of which has long since rotted away, and trees have grown up in the aisles, and overtop the walls, about which jackdaws and rooks wheeled and cawed. Ivy has grown luxuriantly over the shattered arches, as if to heal up and cover the injuries of time. Ruins have a peculiar charm for an *American*, whose country (however joyous and promising the future may be) has comparatively no retrospect.

From Liverpool I was induced to visit Dumfrieshire. It being the season of hay-making, I saw parties of men, women, and children, returning from the meadows, the boys riding the horses decked with flowers; so much pleasure seems to follow the labors of the day, that I could ill conceive the destitution and misery which is said to exist among the peasantry. The climate seems

eminently favorable to the grasses. The showers being frequent and gentle, clothe with verdure even *declivities*, "making all one Emerald," and wearied as I was with the "glassy surface of the gray sea," the verdure of the country was most refreshing. Mr. Southey has aptly termed England "the Paradise of Cows."

Too much cannot be said of the fine tact and taste exhibited by the English, in their *country places*. From the Castle and Palatial residences of the nobleman, and the villas of opulent gentlemen, through all the grades of Farm-houses, to the bower-like Cottages of the peasantry—in the latter particularly, where there is no expensive architecture—it is most pleasant to see how a well kept grass plat—the judicious planting of a shrub or flower, or the tasteful training of a vine—the attention and labor of the smallest intervals of time, can gradually give them an exterior so attractive from without, with such an air of refinement, that it is difficult to believe that mean and debasing habits can ever exist there. I saw near Liverpool, some sweet nestling places, where the houses were so embowered and masked by hedges and shrubbery and vines, that they reminded me of the bird traps which boys disguise with bark and mosses, &c., to allure their game. Crossed the Esk (a small stream) into Scotland, and passed through Greta Green, where the blacksmith welds together runaway matches. The subsequent history of these ardent and impatient lovers, would afford probably, salutary, lessons to many who would marry in haste. Saw the Moss described in Guy Mannering, and afterwards the Sands of the Solway Frith, which Scott makes the scene of an adventure in the early part of Red Gauntlet. What a witchery his pen has given to Scotland! Many square miles of "the sands" are left

bare in the estuary of the Solway by the receding tide, when persons walk and drive across; but there are treacherous spots of *quicksand*, and some fearful accidents occur; the flood tide, in this high latitude, comes in with terrific rapidity and threatens to overflow the shores. The old churchyard in Dumfries is one of the most interesting in the kingdom. It is consecrated by the remains of persons who suffered for their religious faith, whose weather stained tombs are pointed out to strangers by the old sexton, who conducts you also with pride and consequential authority to the *tomb of Burns*, where the poet is represented at the plough. Under a dome, and in the space enclosed by the iron rails, some fine specimens of the *Thistle*, the *noli me tangere* emblem of the Scotch, are cherished. The sexton boasted of having often taken whiskey punch with the Poet, and told with satisfaction the following anecdote. He said, as Burns was fishing one day, a *guager* approached and asked, "Weel Mister Burns, what are ye fishing for?" Burns (who disliked guagers) replied: "I am fishing, sir, for the *auld Nick*." "Eh! Mr. B., and what do you bait with?" "I bait with a *guager*, sir," replied Burns again.

One of my inducements to visit Dumfries, was to see Mr. S——t, an early and esteemed friend of my parents, at his charming villa, *Castle Dykes*, half a mile below the town on the Nith. It is in a bend of the river, and the house commands beautiful views of the town, the river, with its salmon fishery and the Criffel mountains, &c., of Galloway. It was in former days, the site of an *old Castle*, and the fosse, &c., have long grown up with trees, and although only fifteen acres in extent, the advantages of the ground have been seized with such tact, that the winding walks al-

lure you along until you suppose the place thrice as large. An old quarry was converted with excellent judgment into the garden. It is quite a bijou.

It is said that those enterprising sons of England and Scotland, who emigrate, after

accumulating wealth in distant climes, most frequently return to their native country, to pass away tranquilly the evening of their days. The heart is wont to tremble back to the pole of its early affections.

EVELYN.

ONONDAGA AND OSWEGO BEURRE PEARS.

WE have made the acquaintance, the past autumn, of two new pears of such admirable qualities, that we hasten to make them known to our circle of pomological readers; which we do with as much satisfaction as Mr. BURRITT, the "learned blacksmith," has in bringing his variety of *johnny cakes* on the table in every house he visits in Great Britain.

One, and probably both of these pears, are American fruits, and they possess a vigor, hardiness, and productiveness, characteristic of varieties originated on our own soil; and which, joined to their truly excellent flavor, will undoubtedly render them great favorites in every part of our country.

We shall describe,

I. THE ONONDAGA PEAR.

Onondaga Seedling, } Of some Western New-York
Sweet's Orange, } gardens.

A fruit of the first size and quality, in all respects; supposed to be an American variety. It takes its name from having been introduced to notice by cultivators in Onondaga county, where it is still chiefly known, though it was first brought there from Farmington, Connecticut, by HENRY CASE, Esq. As a productive and vigorous tree, and a large and most excellent fruit, it has probably not one superior as an October pear.

Tree very vigorous, with strong upright olive-colored shoots. Fruit large, having externally a good deal of general resemblance

to the Bartlett. Form obovate, swollen in the middle, and tapering a good deal towards the eye, as well as the stalk. Skin fair, smooth, pale yellow at first—golden yellow at full maturity—sprinkled with numerous grey-russet dots, and tinted with a faint wash of reddish-orange on the sunny side. The surface of the skin is slightly uneven, like that of the Bartlett. Stalk rather short, slightly bent, from one to one and a half inches long, inserted with little or no depression, but with the lip of the fruit folded unevenly round it. Calyx quite small, closed, set in a narrow basin of moderate depth. This basin is usually marked with a patch of light cinnamon russet. Flesh white, fine-grained, very buttery, abounding with juice; flavor rich, aromatic, and very excellent, uniting the consistency of Bartlett and the *flavor* of the finest Beurré Diel. Core very small, nearly solid; seeds small and often imperfect. The fruit keeps well, and never decays at the core. Season, October and part of November.

This fruit was first introduced to our notice by a specimen sent by Mr. BISSELL of Rochester, N. Y. Afterwards our friend, E. W. LEAVENWORTH, Esq., of Syracuse, sent us nearly a bushel of the fruit. The latter gentleman, an enthusiastic cultivator of fruit, upon our solicitation, undertook to investigate the history of this pear, a knowledge of which seems as yet to be

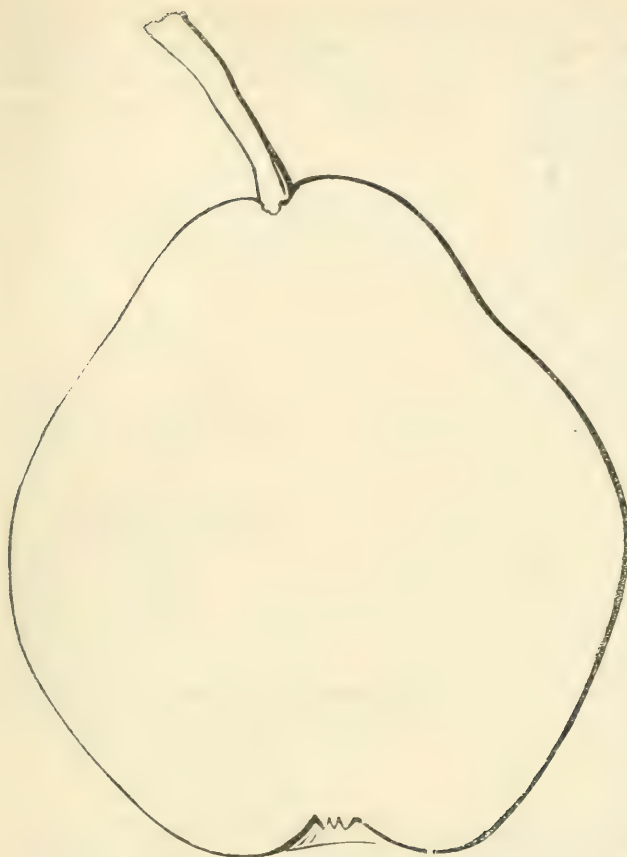


Fig. 77. *The Onondaga Pear.*

entirely confined to the neighborhood of Syracuse and Rochester.

We have before us two letters from Mr. LEAVENWORTH, from which we gather the following interesting facts :

"The only old trees," Mr. LEAVENWORTH writes, "are in Onondaga county, N. Y. Four large bearing trees are growing on the grounds of Mr. KILLMAN near Syracuse, and one on the grounds of Mr. SWAN. All the younger trees in this neighborhood or at Rochester, may be traced back to these. Eight or ten years ago, Mr. SWAN sent some of the fruit from his tree to Rochester, where it was so much admired that the gar-

deners there sent and obtained buds from his tree, and propagated it under the name of 'Swan's Orange.' There is no propriety in the name, as Mr. SWAN has but one old tree, produced from grafts obtained of Mr. CASE, and neither originated nor propagated it largely. These trees all came from HENRY CASE, Esq., now a resident of Ohio, but who formerly resided in Liverpool, a village on the shore of Lake Onondaga, five miles north of Syracuse.

"On applying to this gentleman for the authentic history of this fruit, I received a letter from him as follows: That in the winter of 1806, Mr. CASE cut grafts from a tree then standing in Farmington, Connecticut, on the premises of a Mr. CURTISS—the father of the late FISHER CURTISS, Esq., of Salina. These grafts Mr. CASE put into a stock in

Onondaga in this county. In 1808, he removed that tree to Liverpool, where he then resided, and from whence the grafts were taken which produced the trees now in possession of KILLMAN, SWAN, and others, in this neighborhood. A great many grafts were taken from Mr. CASE's tree, from 1812 to 1828—all who ate of it wishing for grafts. Mr. CASE does not say whether the original tree in Farmington was grafted or not, and probably, after a lapse of time of forty years, it is impossible to ascertain."

Mr. LEAVENWORTH also informs us, that he has traced both SWAN's and KILLMAN's trees of this pear to Mr. CASE's, and has no doubt

that this pear, wherever known in this state, has all been propagated, directly or indirectly, from that identical source. They are all grafted trees. Mr. KILLMAN's trees are from fifteen to twenty years old. They are very hardy, and very great bearers—generally producing three or four bushels each. One of them has borne six bushels in one year. These all stand in grass land, and have not received any culture. Some younger trees that Mr. KILLMAN has, have grown astonishingly, and indeed this variety has more vigor, hardiness, and productiveness than even the Bartlett, so popular everywhere for these qualities.

We will add to the foregoing, that we at first conjectured this might be some old European variety. But other able pomologists, to whom we showed the fruit, as well as ourselves, are unable to identify it with any such. There is, therefore, every probability that the tree at Farmington, Connecticut, forty years ago, was a native.* At any rate, it is a fruit of the first class, unknown to our cultivators, and we have very little doubt, from what we have ourselves seen of *Van Mons' Leon le Clerc*, a very celebrated recent variety, about the same size and season, that the Onondaga will prove superior to it.

Neither *Swan's Orange*, nor *Onondaga Seedling*, local names by which this fruit is somewhat known in Western New-York, can, with any propriety, be retained as the name of this variety. Mr. CASE's name, if that of any person, should be coupled with the fruit, as having brought it into notice. It is plain enough that it is not a seedling of this state. But since the fruit seems now almost unknown in Connecticut, and so

well known in Onondaga county, we can find no better name for it than the excellent one—Onondaga.*



Fig. 78. *The Oswego Beurre.*

II. OSWEGO BEURRE.

Reed's Seedling.

A new native pear of excellent qualities, raised from a seed of the White Doyenné, by Mr. WALTER REED of Oswego, N. Y. It combines, in a great degree, the finer qualities of the White Doyenné and the Brown Beurré; is a remarkably hardy, thrifty sort, an early and abundant bearer, and will undoubtedly soon become a very popular variety.

Fruit of medium size, form oval-obovate, regular. Skin smooth, yellowish-green, streaked and mottled with thin russet. Stalk short and stout, set in a bold and rather deep cavity. Calyx much like that of the White Doyenné, small, closed, set in a smooth regular basin, which is only moderately de-

* This point, if it can be ascertained, we shall be able to speak of with more certainty soon.

* Messrs. Elwanger and Barry of Rochester, we believe, have a few trees in their nurseries, of this scarce variety.

pressed. The flesh is in consistency and taste between that of the Brown Beurré and White Doyenné, buttery, melting, juicy, with a brisk, rich, slightly sub-acid and excellent flavor. Core small. Seeds few. It ripens at the same time as the White Doyenné, and keeps well. From its early and abundant bearing, and its gradual maturity, it is admirably calculated for a market fruit.

We are chiefly indebted for our knowledge of this excellent new pear, to our friend, Mr. ALLEN of Oswego, who has furnished us with specimens, and has also given us a personal account of its character.

The Brown Beurré and the White Doyenné, (Virgalieu,) were for a long time almost the only sorts grown at Oswego, where they still grow in admirable perfection. From the marks which the fruit of this pear bears, externally and internally, there can scarcely be a doubt, that it is the product of a natural cross between these two fine old

sorts, formerly growing near each other in Mr. REED's garden.

The original tree of the Oswego Beurré is now growing on the premises, formerly Mr. REED's, one mile east of Oswego village. Its habit of growth is much like that of its parent. But it is one of the most remarkable bearers on record among pears. Mr. ALLEN informs us that it began to produce fruit when only eight or nine years old; that he has known it lately to bear fourteen bushels of fruit in one season, and that it always yields an abundant crop. It has never failed to give a crop for the whole fifteen years it has been in bearing—the best proof of its great hardiness.

Mr. ALLEN has proposed to us to call this fine new fruit, not hitherto described, the *Oswego Beurré*. He will, no doubt, be able to furnish such amateurs with grafts as may desire to give it a trial. We can vouch for its being truly a most desirable new variety, superior to four-fifths of those received of late years from France and Belgium.

THE ACHIMENES PICTA—THE PAINTED ACHIMENES.

FROM THE LONDON HORTICULTURAL MAGAZINE.

ONE hardly knows whether most to admire the leaves or the flowers of this plant: at any rate, if it is chiefly ornamental when in bloom, it is no mean ornament when devoid of blossoms, for its leaves are most beautifully painted with zebra-like markings.

Like the other species of *Achimenes*, this is furnished with scaly tubers, which afford one means of propagating the plant to an almost unlimited extent; for, under suitable management, every one of the minute scales of which these tubers are composed, is capable of producing a plant. Above ground, the plant assumes a succulent her-

baceous character; the stems growing erect, to a varying height, from one to two feet, according to the management to which the plants are subjected. The leaves and stems, and indeed every part of the plant, is thickly studded with rather longish hairs. Opposite each other, at intervals, along the stem, the rich, deep, velvety black-green leaves are produced: they are of a cordate-ovate figure, and are mottled and reticulated with pale whitish blue, in distinct, broad bands, branching outwards from the centre, and giving them the richest imaginable appearance. From the axils of these leaves,

toward the upper part of the stem, the flowers are produced; their form will be understood from the annexed engraving, fig. 79; their color is very brilliant—the upper



Fig. 79. *The Achimenes picta.*

half of the tube and the two upper segments being orange scarlet, and the other part of the flower deep yellow, mottled with broken lines of scarlet. It flowers towards the end of the summer, but its flowering period may be very much lengthened by the plan of raising young plants at successive intervals.

The plant is a native of New-Grenada, where, in the wooded heights on the east of Guaduas, Mr. Hartweg, the Horticultural Society's collector, found it growing in a forest of Wax Palms, *Ceroxylon andicola*: in its native habitat, it prefers dry rocky ground in places not much shaded, where it scarcely grows more than five inches in height, seldom producing more than two flowers on a stem.

There is a very remarkable difference between the plant in this wild form, and when

seen under the influence of cultivation. Neither is this *Achimenes* the only plant upon which horticultural skill has produced a marked improvement. Instead of growing merely five inches high, and bearing two flowers on a stem, it usually grows at least a foot in height, and every stem bears six or eight flowers; but some plants of extraordinary luxuriance have been produced far excelling even this state. Plants have been grown to a height of three feet, quite healthy and thick of leaves, and bearing four or five flowers, or even more, together on the axil of one leaf; and "last spring," says Mr. Paxton, "we measured a stem, from which several vigorous branches had issued at a short distance from the root, which extended upwards of four feet and a half from the surface of the soil to the top of the plant, and with upwards of forty expanded flowers upon it." So far do our cultivated specimens surpass those in a natural state.

The treatment of the plant is very simple; after flowering, the stems die away, and the tubers then require to be kept dry and cool. At the proper time, usually in spring, the tubers are to be potted in shallow pots, in light rich compost of loam, leaf mould and peat earth; and they are best started into growth by the aid of a little bottom heat: about five roots may be placed at regular distances apart, in a pot six inches in diameter; or they may be planted thickly together in a shallow pan, and finally transplanted and arranged when they have grown an inch or two above the soil. There is no necessity for incurring the trouble of repotting them during their after growth, as they may be placed at once in their blooming pots, these being properly and thoroughly drained. They grow best in a warm pit, where there is a moist atmosphere, and a temperature of 65 or 70 degrees, and where they may be partially shaded during bright sunshine.

In summer they may be removed to a warm green-house, where they continue longer in bloom. Some of the roots should be excited early, and others should follow them for as long a period as the succession can be maintained. The plants will require from two to three months (more or less) to grow them into a flowering state.

But, besides, by means of the separation

of the tubers, the plants may be abundantly propagated by planting the leaves, which produce roots readily under the ordinary treatment given to cuttings, and soon make good plants.

Plantations of the leaves from the growing specimens, may serve to keep up the succession of blooming plants through the latter part of the year.

REVIEWS.

FLORE DES SERRES ET DES JARDINS DE L'EUROPE, ou Descriptions et Figures des Plantes les plus rares et plus méritantes, nouvellement introduites sur le Continent ou en Angleterre, &c. L. VAN HOUTTE, Editeur, à Gand. *A Flora of the Green-houses and Gardens of Europe, &c. Edited by L. VAN HOUTTE.* Ghent. 1846. Large 8vo. Price 15 francs, (about \$3.)

THIS is a very admirable work, now in course of publication in Belgium. It is conducted upon a plan much like that of the celebrated English works, the *Botanical Magazine* and *Paxton's Magazine*; but while it appears to us equal to those works in the spirit and style of its literary portion, and by no means inferior in its beautiful colored plates, it is offered at an exceedingly low price—about one-third or one-fourth of that of the English periodicals.

M. VAN HOUTTE, who is the editor and proprietor of this work, nearly two volumes of which have already been issued, is the most distinguished horticulturist in the Netherlands. His commercial gardens at Ghent, are well known in Europe and America, for the great variety, novelty, and extent of the collections they embrace. To the enterprise of commerce, M. VAN HOUTTE adds the zeal of the enthusiastic amateur and the ardent devotee of science. The beautiful work before us is one of many proofs of this.

In conducting the *Flora*, M. VAN HOUTTE has the continual assistance of some of the ablest pens on the continent: M. BROGNIART, the professor of botany, and M. DECAISNE, assistant naturalist at the Museum of Natural History, Paris; M. LEMAIRE, the editor of the *Herbrier de l'Amateur*; M. MIGUEL, director of the botanic garden of Rotterdam; and M. SCHEIDWEILLER, the professor of botany at Brussels.

To the amateur of rare plants, this work is one of the most valuable and interesting that we know. Each of the descriptions is in English, French and German. The English text is usually copied from the *Botanical Magazine*, or *Paxton's Magazine*—but the French text, which is most copious, is not a translation of this, but usually a description in far more racy and lively terms. To those of our readers who are conversant with the French language, we, therefore, most warmly recommend M. VAN HOUTTE's periodical.

We give an extract from one of the late numbers—a part appended to the description of an exquisite air-plant—*Sophranitis grandiflora*. It is from the pen of the principal editor, and conveys a vivid picture of the attractive sites in Brazil, where this and other *Orchids* grow with wonderful beauty and luxuriance.

"I shall always retain the remembrance of the *serra d'Itaculumi*!—of those gigantic rocks, piled one upon another, and forming a mass of several miles in circumference.

The outermost houses of the *Cidade de Ouro Preto*, the capital of the mining district, are picturesquely grouped at the base of this mountain. The approach is imposing, and when the traveller ventures within this labyrinth, formed by a multitude of paths, seemingly without any outlet, he is soon quite isolated from the world, and arriving half-way, after a tedious ascent of about ten hours, he sees in the west a wooded country, where the wandering *Coroados* and *Buticudos* are encamped; while towards the east he seems forever to bid adieu to the last traces of civilization, even to those settlements nearest to the desert. Ah! the remembrance of one such a scene is indeed an epoch in one's life. In what bold relief it stands out from the every day points which have heretofore marked its course! From the vast bay at the entrance of which the proud Rio-de-Janeiro bathes its feet, up to the frowning peaks which preside over it, in the midst of its villas—amid the depths of its palm-groves, and among that reckless population assembled from every part of old Europe, here to seek fortune and happiness—and again from these regions even to the Rio-Pardo! What a succession of emotions, at the same time fearful and pleasing—what a crowd of wild and thrilling sensations fill our souls, and take possession of us, poor Europeans, born in the midst of fogs and surrounded by tame fields and gardens! Astonishment and admiration bewilder us, whether we raise our eyes to those mountains, or cast them down towards those valleys enriched with the most luxuriant vegetation! There *Erythrinas*, which rival our oaks in height, and, although as yet without leaves, covered with millions of full-blown, glowing flowers, which appear, at a distance, like immense globes of fire; and gigantic *Jacaraudas*, blending their innumerable blue blossoms with the azure of the heavens. Here also is the *Bignonia venusta*, with its garlands of orange colored flowers, binding and stifling in its thousand folds, trees of the first magnitude! The *Parkia*, crowning with its ample diadem the *Melastomias*, the *Boginvilleas*, the *Franciscies*, those brilliant plants, so much prized in our hot houses; in the distant horizon are seen the environs of the *Cidade de Barbacena*, built in the most picturesque manner, in the midst of a forest of Chili pine (*Draucarias*.) Here is the *Velozia*, the pride of Brazil, crowning the naked rocks; among the grasses is seen the fabulous *Virgularia*, the useful *Gomphrena tuberosa*, the fugitive *Lisianthus*; there, the wild and restless ostrich feeds in safety; more distant still, at the top of some withered tree, the cry of the *Ferrador* vibrates in the air, recalling the sound of the anvil struck by the hammer; there are besides the poetical looking *Ranchos*, or rude inns, affording a lodging to the caravans, who here refresh themselves after the fatigues of the day, seeking diversion in cards, or listening to the sounds of the mandolina; in short, in these distant countries all is new, all is strange to the native of Europe! As for me, poor solitary traveller, when night came

on, and I was quietly cradled in my hammock swung between two rocks, in Itaculumi, how proud, how happy I was! To see myself so near the heavens, and possessing for a palace the most majestic sites of the earth! Myriads of the *Sophronitis grandiflora* luxuriated around me; that charming little orchideous plant, whose abundant blossoms, tapestried with purple a vast perpendicular rock, more than eighty feet high. Its little pseudo-bulbs closely pressed against each other, seemed to form but one mass or rather one single plant! What hot house in Europe could contain this specimen of the marvellous vegetation of the tropics!

Since, in our cold and bleak Europe, we are reduced to cultivate only pitiful samples, let us at least endeavor to render them agreeable to the eye, let us make the miniatures perfect; and since variety must, with us, stand in the place of such vast prodigality of numbers, let us arrange artistically upon the white bark of the Birch tree, our little *Sophronitis*, truly the giants of the genus, when we consider the great size of the blossoms. To speak truth, is to complain of the small size of those of *Sophronitis ceruua*, which notwithstanding have also peculiar charms of their own.

.....

DESIGNS FOR MONUMENTS AND RURAL TABLETS, adapted to Rural Cemeteries, Churchyards, Churches, and Chapels. With a preliminary essay on the laying out, planting and managing of Cemeteries, and the Improvement of Churchyards, on the basis of Loudon's work. By J. J. SMITH. New-York, Bartlett & Welford. 1846. 4to., with many anastatic plates.

In reviews lately of MARTIN's beautiful work, *Greenwood Illustrated*, we noticed the importance which the subject of Rural Cemeteries has obtained in the United States; and commended that work for its many beautiful features. The present work is one just issued, and which has strong claims on our attention in a more practical point of view.

Now that rural cemeteries are being formed in the environs of almost every large town in the Union, some works on the principles that should be observed in laying out and keeping them, and especially some guide to the seeker after designs for monuments and mural objects is greatly needed. Many an error that an uninformed committee would readily enough fall into, and which might, perhaps, afterwards be irre-

mediable, would be entirely avoided by the possession of some good written authority on the subject. Many a vile monument would, perhaps, never be ordered, if the little satisfied person who selects it, could but once see a design, that would body forth some vague but inexpressible better idea of shape in marble, which he has in his mind.

It is to meet such popular wants that this volume is issued. The letter press is composed mainly of judicious selections from Mr. LOUDON's little volume on Cemeteries, the last one his pen produced. Mr. SMITH has very properly omitted such of Mr. LOUDON's remarks as appertain to the very formal style of laying out cemeteries, which the latter advocated. Such a mode is perhaps the only one for the borders of large towns, where space is small, and a geometric arrangement all that is possible to have. But in America, the good taste shown at Mount Auburn, has been copied almost universally in choosing the sites of other rural burial places, viz., to select some diversified wooded surface, some distance from the town, affording scenery where *nature*, rather than *art*, should always retain most command over the feelings.

The second half of the volume is devoted to designs for the monuments themselves. Monuments are objects which are intrinsically but little valued or understood by Americans, though in older countries they take strong hold of the national heart. "A garden cemetery and monumental decoration, afford the most convincing tokens of a nation's progress in civilization, and in the arts which are its result. We have seen with what pains the most celebrated nations of which history speaks, have adorned their places of sepulture, and it is from the funereal monuments, that we gather much that is known of their civil progress and

their advancement in taste. Is not the story of Egypt written on her pyramids; and is not the chronology of Arabia pictured on its tombs? Is it not on the funereal relics of Greece and Rome, that we behold those tender images of repose and tender sorrow, with which they so happily invested the idea of death? Is it not on the urns and sarcophagi of Etruria, that the lover of noble sculpture still gazes with delight? And is it not amid the catacombs, the crypts, and the calvaries of Italy, that the sculptor and painter of the dark ages chiefly present the most splendid specimens of their chisel and their pencil? In modern days, also, has it not been at the shrine of death, that the highest efforts of Michael Angelo, Canova, Thorwaldsen, and Chantry, have been elicited and exhibited? The tomb has been, in fact, the great chronicle of taste throughout the world. In the East, from the hoary pyramid to the modern Arab's grave; in Europe, from the rude tomb of the Druid to the marble mausoleum of the monarch; in America, from the grove which the Indian chief planted round the sepulchre of his son, to the monument which announces to the lovers of freedom the last resting place of Washington." (*Necropolis Glasguensis*, as quoted, p. 7.)

We have to say it with pain, that judging by this standard, the Americans as a people would fill but a sorry page in the history of the world. Washington's tomb is an insignificant and neglected piece of brickwork, disgraceful to the sympathies and taste of a great people, in whose hearts he is truly and profoundly cherished. But the arts always perfect themselves by degrees in a youthful nation, and the *organ of veneration* will doubtless be found more fully developed half a century hence.

In the meantime, rural cemeteries will

most completely serve to maintain that connection with the past, which the onward and restless spirit of such a republic as ours naturally finds it most difficult to establish and keep up. And if the inhabitants of our numerous cities are in the familiar employment of fine monuments to commemorate family virtues, and the modest worth of local reputations, we cannot doubt that, at no distant day, there will be patriotism enough to assign the most appropriate spot and the noblest work of the sculptor, to signalize the last resting place of the illustrious dead.

....

ICONOGRAPHIE DESCRIPTIF DES CACTEES, ou essais systématiques et raisonnés sur l'Histoire naturelle, la classification, et la culture des plantes de cette Famille. Par CH. LEMAIRE. In folio. Paris. H. Cousin. (*Illustrated History and Description of the Cactaceæ, &c.*)

A very excellent French work, now being issued in Paris, edited by LEMAIRE, and de-

voted to that unique group of plants, some individual or other of which is known to almost every one of our readers, under the name of *Cactus*. From the well known "Prickly Pear," which grows in our rocky woods, to that superb and almost mysterious vesper queen, the Night-blooming *Cereus*, *C. grandiflora*, there are now known to botanists and to cultivators a vast number of species, some strange and grotesque, some positively repulsive, and many very brilliant and attractive—but altogether forming one of the most distinct and interesting natural orders in the Vegetable Kingdom.

The work before us is devoted to a full account of these plants. The plates are large and handsomely colored, and they faithfully portray the species. The text is systematic, and executed with scientific care. It is a work well worthy of the attention of the devotee to exotic plants.

LITERARY NOTICES.

I. ILLUSTRATIONS OF MEDICAL BOTANY. *A series of upwards of one hundred Medical Plants, affording all the important articles of the Materia Medica.* By JOSEPH CARSON, M. D., Professor of Materia Medica, Philadelphia. Lloyd P. Smith, Philadelphia.

WE learn that a highly useful and valuable work, bearing this title, has been undertaken in Philadelphia, by Dr. CARSON. It is intended to supply a desideratum experienced by medical men and dealers in medicines, which, notwithstanding the many botanical and medical works, still exists. Dr. CARSON's reputation as a teacher of *Materia Medica*, gives assurance that this work will be ably performed.

The illustrations will be done on stone by an artist of eminence, the same who executed AUDUBON's *Fauna*; and the plates

will be admirably colored from Nature by European colorists. There can be no doubt, therefore, that the work will be one eagerly sought after by all those interested in Medical Botany.

We understand only a small edition will be issued, and those who wish to secure the work are recommended to send their names to the publisher, LLOYD P. SMITH, Philadelphia. It will be issued in four numbers, price for the whole \$15, or on large paper, \$25.

II. L'ART DE FAIRE DES BOUTURES—*The art of Propagating by Cuttings*, is the title of a clever little volume with upwards of thirty engravings, by M. NEUMANN, the well known French horticulturist, lately published at Paris, price two francs.

FOREIGN NOTICES.

FREDRIKA BREMER.—In a letter which we have had the pleasure of receiving very lately from this distinguished Swedish authoress, she speaks of America and of *Arsta*, her own country home, near Stockholm, in such interesting terms, that we venture to print an extract containing these passages, for the gratification of our many readers, who, we know, are warm admirers of her remarkable genius.—Ed.

“Indeed the kindness manifested from your country to the far-off stranger, fills me with a most delicious feeling of joy and gratitude. And these endearing hands, stretched over the great ocean, in good will and benevolence, how eloquently do they bear testimony to the coming of that spirit which bids space and time vanish, that its work of love and union may be accomplished throughout the world. I sincerely hope to be so happy as to say this personally to you.

“It has long been the wish of my heart to visit America, and to see with my own eyes that new up-rising world. Indeed there is no other foreign land that I wish to know out of North America, and that especially for the peculiar turn of mind of its people, in public as in private life, in the state, *the home*, in society and in nature.

“In many of these spheres, methinks I see the idea—the sum of intellectual life—clearing up, making its way to earthly reality, and transforming chaos into harmony and beauty. A specimen thereof, is even your Landscape Gardening, on the subject it embraces.

“We very much need such a book in Sweden, to help some of us to plant and build, and others to open our eyes with some understanding to the objects that surround them—at least to be a little less drowsy.

“Allow me now to ask, have you no intention of coming to Sweden, to see our romantic land, its cottages and old mansions? There is one of the latter which would gladly open its doors to welcome you. It is on the coast of the Atlantic, three Swedish miles from Stockholm. Its name is *Arsta*. And happy should one of its inmates be, there to make you “les honneurs” of her native land, and, let me whisper it—to have your counsels about a most unlucky and *mis-striving* plantation, in *no style at all*, which she has there undertaken. Allow her, my dear sir, here to entreat you to pay a thought or two to this, and to hope a joyful result! In the mean time, she subscribes herself,

Your obliged and thankful

FREDRIKA BREMER.

“*Arsta, the 23d October, 1846.*”

.....

DEATH OF M. SOULANGE-BODIN.—We record with regret the death of this most distinguished French horticulturist, perhaps better known in this country than any other except M. VILMORIN.

M. SOULANGE-BODIN has for a long time been one of the most zealous friends of Gardening in

Europe. His fine *gardenesque* residence at Fromont, was some years ago the point from whence was disseminated more practical knowledge in the arts of culture than any other in Europe. Fromont was widely known, not only by its great collection of plants, but by its excellent Institute for the practical and theoretical education of gardeners, and by the admirable spirit of benevolence and enthusiasm which entirely pervaded it.

We enjoyed the honor of a correspondence with M. SOULANGE-BODIN, and prize very highly a copy of the *Annales de l'Institut Royale Horticole de Fromont*, in six vols., which he kindly sent us. This work contains many admirable essays on horticulture, and is rendered especially valuable by the course of lectures on horticulture which was delivered at Fromont.

The beautiful *Magnolia Soulangiana*, originated at Fromont, which is known to all amateurs of trees in America, is to us an interesting memento of the excellent and distinguished man it was named to commemorate.

M. LE CHEVALIER SOULANGE-BODIN, born in 1774, was a pupil at the college of Tours, and was distinguished from his earliest youth, by a lively and discerning imagination, and a great aptitude for study. His parents designed him for the practice of medicine, but the events of his time induced him to enter upon a diplomatic career, and he followed general AUBERT DUBAYET to Constantinople, as ambassador's secretary. Although M. BODIN was then but twenty years of age, such was the confidence placed in his talents and judgment, that several important missions were confided to him. In the days of the Empire, he was attached to PRINCE EUGENE, as *chef de cabinet*; he followed him in the campaigns of Italy, Germany and Russia, and received, as reward for his services, the cross of the Legion of Honor, and the insignia of the Iron Crown.

During these expeditions, the contemplation of nature under various aspects, and the inspection of a great number of the finest villas and gardens, developed in him a decided taste for fine trees, for plantations, and for the picturesque; and he already began to accumulate and to plant in the park of Fromont, choice specimens of plants and trees in groups, masses, or separately, which now render this park a most charming and delightful spot.

At the downfall of the empire, M. BODIN renounced all connection with politics, and retired to Fromont, which he has continued to embellish with new plants, and by the construction of numerous hot-houses adapted to the cultivation of plants from every climate. Within a short time, Fromont has become a horticultural establishment of the first order, and M. Soulange the most distinguished promoter of horticulture. The variety of his attainments, his talents and his amiability, had gained for him many friends. From the time of its foundation in 1827, the *Royal Horticultural*

Society of Paris appointed him *Secretary General*; still later, he was a member of the *Royal and Central Agricultural Society*, and shortly after, he became its *perpetual Secretary*.

In 1829, M. SOULANGE founded a horticultural institution at Fromont, which Charles X. visited and patronized, and to which he gave the name of the *Royal Horticultural institution of Fromont*. The dearest wishes of M. Soulangé, seemed now to be accomplished. He felt himself in a position to give to Horticulture an impulse which he had for a long time meditated and desired. Vain hope! The events of 1830—the abdication and flight of Charles X., and the reversals of all political and social affairs, destroyed the plans and the prosperity of the Institute, and the hopes of its founder together.

For some time afterwards the moral force of M. SOULANGE sustained him; but his afflictions gradually undermined his health. His head, he said, was always strong, but his frame sunk more and more under the weight of his sorrows. He was no longer able to visit his vast green-houses, nor the plants he so much loved; he could now only see from his window the fine groves and the pleasing landscapes that he had formed. At last M. SOULANGE BODIN expired on the 21st July, 1846, at the age of 72 years, surrounded by his family and several old and tried friends.—POITEAU, *Revue Horticole*, Aug. 1846.

The following account of Fromont and its proprietor, from the pen of Mr. LOUDON, may not be out of place at this moment:

“M. Soulangé-Bodin combines, at Fromont, an elegant villa residence with an exotic nursery, and an institution for young horticulturists. M. Soulangé-Bodin, like M. Vilmorin, is at once a skilful cultivator, a *marchand grenetier* (seedsman,) a scholar, and an accomplished gentleman. As connected with the army, he has been all over Europe; and having been long, to use the Prince de Ligne’s phrase, under the influence of the *jardinomanie*, wherever he went, the gardens were the main objects of his attention. At one time he had the principal management of the gardens of the Empress Josephine at Malmaison. On M. Bodin’s retirement to Fromont, in 1814, he commenced laying it out in the English manner, and so as to combine the picturesque scenery of the park with the profitable culture of the nursery. The grounds exceed a hundred acres of surface gently varied, and sloping to the Seine. They are surrounded by a walk or drive, which displays varied views of the interior, the main feature of which is the château; and of the Seine, with some rising grounds, beyond the boundary. In various spaces among the groups of trees, are formed beds of peat earth, in which seedlings of American shrubs are raised; the more rare kinds being propagated by artificial methods. In the walled garden near the house, are numerous pits and frames, in which the more popular exotics, such as the Orange, Camellia, Azalea Indica, and numerous other green-house and hot-house plants, are increased by hundreds. In effecting this, one of the principal modes employed, is herbaceous grafting, or grafting on the young wood: the plants thus raised are sent to all countries.

In the larger green-houses and hot-houses, there is a collection of fine specimens, intended principally for ornament. The object of the institution for the instruction of young gardeners is, to supply French country gentlemen with young men, well acquainted with both the practice and the theory of their art in all its branches. For this purpose there are professors, a library, a museum of implements and models, and a monthly journal, entitled *Annales Horticole de Fromont*. There is not a more striking example in all France, of the gentleman and the man of science being united with the tradesman, than in M. Soulangé-Bodin; nor a villa, in which more industry and activity goes hand in hand with picturesque beauty. There is nothing of the kind that we know of in England; nor can there be in the present state of things. It is perhaps one of the finest moral features in France, that most gentlemen are either manufacturers, tradesmen or farmers; and that most of the persons practicing these professions are, in their manners, gentlemen.”

BLUE-FLOWERED HYDRANGEAS.—The possibility of changing to a blue tint the rose-colored blossoms of the Hydrangea, by means of a mixture of iron with the soil they grow in, was announced some time since, by numerous floricultural amateurs; and we read, in the bulletin of a horticultural society in the north of France, that a cultivator of that region had succeeded, by this process, in causing several flowers of these plants to turn blue. To attain this result, it is advised that a strong proportion of iron filings should be mixed with bog or peat earth, or what is better still, the refuse which accumulates from the sharpening of instruments on a grindstone, in which the particles of iron are infinitely more attenuated than those of the filings. These, and many other measures have been tried in England, without any result. But Mr. PAXTON, from whom we borrow a portion of these details, has seen, in that country, four Hydrangeas, planted in a clayey soil naturally impregnated with iron, and moistened by a stream of water, also very ferruginous, which flowed from a neighboring rocky bank, some of whose blossoms were of a *pure blue*, without any mixture of rose or lilac, while other roots of Hydrangea, planted about thirty feet distant, preserved their natural color. No means had been used to bring about this result, which was entirely due to nature. The water which dropped from this rock, was slightly tawny, and resembled in color the sprouted barley, usually seen at breweries. It was evidently a solution of peroxide of iron in an acid, probably sulphuric acid.

This new experiment seems to point out that the changing of the Hydrangea blossoms to a blue color, must be attributed to the action of iron, but also that it will not act in all cases alike, and especially when employed in a metallic state. No doubt, some useful experiments might be made, and if it were found that the flowers of the Hydrangea could be altered or *azzured* at pleasure, we need not despair of obtaining the same result with other and more interesting species of plants.—NAUDIN, in *Revue Horticole*.

PARIS PEACH GARDENS.—*Montreuil-aux-Pêches* is about four miles east of Paris, and, together with the adjoining village of Bagnole, has long been renowned for its Peaches and Nectarines; so much so, that Paris and the country for fifty miles round, is almost entirely supplied from these two places. It is, in fact, their staple article of trade, and one by no means inconsiderable, if report speaks truly of the amount, which is stated to be, on the average, 80,000 francs a year, independent of other fruits. An exact estimate of a produce so entirely regulated by the state of the weather is, I think, very difficult to ascertain. The year 1841 was unproductive, and the long continuance of wet and cold also materially checked the consumption; this season, on the contrary, has been exceedingly prolific, and the excessively hot weather in August augmented the demand in an equal ratio, and it is said that the sale this season realized more than 120,000 francs.

Large as this sum may at first sight appear, it will not upon reflection be found exaggerated, when the number and extent of gardens is taken into consideration. The markets and streets of Paris were literally glutted at the end of July; and in August, fine fruit was sold at one penny, and very good at a half penny each. The gardens vary in size from one-half to a whole acre, and are surrounded with walls about eight feet high, rising amphitheatrically, one above another, to the top of the hills; they give the neighborhood a picturesque appearance. The soil is generally a deep sandy loam, with here and there, a mixture of blue clay, similar to that of Montmartre and Père la Chaise. Most of the trees are old, yet their general appearance is healthy, which the cultivators attribute as much to their being worked upon almond stocks, as to the suitability of the soil. Fan-shaped training is usually adopted; but another form called "*Espalier carre*," is now coming into vogue. M. Lepère, of Montreuil, claims to be the originator of this system, which, however, is warmly disputed by others. It appears to me to be little, if at all different from the horizontal training which has for many years been practiced in England. As the design of these gardens is profit, it may be readily supposed, that the varieties are chiefly confined to those which are most prolific, or produce the finest fruit in their different seasons of maturity. At almost every cultivators, I found the *Petite* and *Grosse Mignonne*, *Chevreuse hative*, *Galande*, *Magdeleine*, *Bouraine*, *Admirable*, *Belle de Paris*, *Royale*, *Parie*, and *Teton de Venus*, with a few Nectarines, such as *Violette Hative*, *Musque*, and *Grosse Violette*. The other parts of the walls are clothed with Cherries, Plums and Pears. Strange as it may seem, I could not find any one who grew the *Morello* cherry; and although I have often asked for it in Paris and the other cities of France, I have never yet been able to meet this delicious variety. The cherry used here for preserves and brandy is somewhat of the same form, but far inferior in size, and totally deficient in the racy vinous flavor so peculiar to the *Morello*. Among the Plums I found *Royale de Tours*, *Monsieur*, *Reine Claude*, *Mirabelle*, and *Reine Claude Violette*, most prized

among the older sorts: *Coe's Golden Drop* is also becoming known and in much request. *Triel* is a small town, northwest of Paris, between St. Germain and Poissy; it enjoys an equal reputation for Apricots. The soil is here light and sandy, and the gardens are walled and terraced, in the same manner as those at Bagnole and Montreuil, but the culture is not upon the same extensive scale. The training and pruning do not, as far as I could learn, differ in any way from those in general practice. The fruit is entirely sold to the Parisians, and is valued, on the average, at about 40,000 francs a year. The only varieties in cultivation are *Precoce*, *Musch*, *Abricot Pêche* and *Breda*, on the walls, and *Precoce* and *Abricot Pêche* on standards. This last is of first-rate excellence, and succeeds admirably in the open grounds; it is of the largest size and fine flavour, very like the *Mon Park*, if it is not, indeed, the same. The *Mirabella Plum* is also very extensively grown in both these places, and for preserves it is preferred before any other variety. I have not often seen it thus used in England, and may therefore be excused from calling attention to its merits. When perfectly ripe it is of a beautiful transparent, wax-like, golden color, with a flavor something between the Apricot and Date. It is excellent preserved in brandy, to which it imparts a peculiar softness and delicacy, far superior, (as I think) to that of cherries; it also keeps its color for a considerable length of time. But this is not all; its greatest attraction is when it has become one among the favored coterie denominated *Glacé*; there it challenges equality, if not superiority, to the *Apricot*, *Reine Claude*, *Pasteque*, *Chinois*, or even the *Pine-apple* itself.—*For. Cor. Gardeners' Chronicle*.

REMARKS.—We copy the foregoing chiefly for the sake of comparing the easy culture of the Peach in our more favorable climate, with that of Paris. At Montreuil, the celebrated peach district of France, all the trees must be trained on walls or espaliers; the average annual product is 80,000 francs (about \$16,000,) and the markets of Paris are considered glutted, when the fruit is worth an English penny each, (i. e. at the rate of \$4 per bushel.)

Contrast with this the peach orchards of New Jersey and Delaware, which supply the markets of New York and Philadelphia. One county, (Newcastle) in Delaware, contains about twenty-five hundred acres devoted to peach orchards—the annual product of which is nearly or about \$200,000. The Messrs. REYBOLDS alone in that county raise, annually, nearly four times as many peaches as all the growers of Montreuil. These great peach growers are, we believe, very well content with an average of 75 cents per bushel for their crop. We have no means at hand for giving an estimate of the product of the peach crop of New Jersey, but it is very large, and we trust some friend will enable us to give it authentically. It was stated in one of the newspapers last year, that peaches to the enormous amount of \$1,200,000 were sold (partly of course for re-shipment) in the city of New York last season! This will give foreigners some idea of the orchards of the United States—

for these are all, of course, grown on standard trees. We wish that we could add that they are *all* of the finest kinds, and carefully grown. But we cannot. There is yet great want of judgment in this respect. *Quantity* is all that is cared for by many growers.—*Ed. Hort.*

CLIANTHUS PINICUS AS A CREEPER.—Those who have not seen this trained as a creeper can form no correct idea of the splendor of this truly beautiful plant. The *Clianthus* in the conservatory here extends about 35 feet; on the next rafter is *Glycine* (or *Wistaria*) *sinensis*, and at the top of the house both creepers are turned to meet and intermingle their flowers in festoons, the effect of which is very good. Both plants flower twice in the season. By being forced, or rather forwarded in February and March, they bloom the latter end of March and April, and again in September.—*J. L. Snow, Gardeners' Chronicle.*

SILK-WORMS, &c.—At p. 709 you allude to the introduction of silk-worms, by Mrs. Whitby, of Newlands. The writer of this being in Paris in the year 1837 or 1838, heard the late M. Audouin, professor at the Jardin des Plantes, state that after repeated attempts, he had at last succeeded in procuring from the southern parts of the United States, a gigantic species of silk-worm (averaging six or seven inches French in length,) at that time unknown in Europe, much harder than the common silk-worm,—particularly as to its food. Could you inform me if any attempt has ever been made to introduce it into this country? Might I also ask if any attempt has been made to introduce the *Vicugna*? for the writer of this recollects well hearing M. St. Hilaire express himself strongly on the great superiority of its wool to that of the Alpaca, and his entertaining no doubt of the possibility of introducing it to Europe. Lastly,—you stated some time since, that Mr. Barker has sent to this country from *Suaedia* (I believe at the mouth of the *Orontes*,) a kind of Peach (*Nectarine*) entirely unknown in this country, the peculiarity of which appeared to be a total absence of hydrocyanic acid in the pulp or seed. Is it possible that our common Peach might have originated in the bitter Almond, and this Peach in the sweet?—*Karpophilis, Nov. 3.* [We must trust to our kind correspondents for answers to these inquiries.]—*Gardeners' Chronicle.*

REMARKABLE LINDEN TREES.—In the middle ages, during the struggles of the Swiss and Flemish people to recover their liberty, it was their custom to plant a lime tree on the field of every battle that they gained over their oppressors; and many of these trees, particularly those planted by the Swiss in commemoration of their victories over Charles the Bold, are still remaining (see p. 162,) and have been the theme of many ballads.

“Evelyn, in his *Sylva*, mentions some large lime trees ‘at Basil, and that at Augsburg, under whose prodigious shade they so often feast and celebrate their weddings; because they are all of them noted for their reverend antiquity; that of Basil branching out one hundred paces in diameter from a stem of about 20 feet in circle, under

which the German emperors have sometimes eaten; and to such trees, it seems, they paid divine honors, as the nearest emblems of eternity.’ (*Hunt. Evelyn*, ii. p. 180.) At Neustadt, in Württemberg, there is a prodigious lime tree, which gives its name to the town, that being called Neustadt an der Linden. The tree is said by Evelyn to have had, in his time, a trunk above 27 feet in circumference, and the diameter of the space covered by its branches to have been 403 feet. It was ‘set about with divers columns and monuments of stone (82 in number, and formerly above 100 more,) which several princes and noble persons have adorned, and which, as so many pillars, serve likewise to support the umbrageous and venerable boughs; and that even the tree had been much ampler, the ruins and distances of the columns declare, which the rude soldiers have greatly impaired.’ (*Ibid.*, p. 187.) Evelyn adds copies of many of the inscriptions on the columns, the oldest of which is dated 1550; and the column on which it is inscribed supports one of the largest limbs, at a considerable distance from the tree, which must thus have been of enormous size nearly three hundred years ago. In the wars which afterwards desolated the country, this lime tree suffered severely; and Gilpin tells us that its limbs were mangled in wantonness by the troops besieging Neustadt. This tree is still (1838) in existence; and, by a drawing of it made for us in 1837, by M. Abresch, a young German artist, we find that its trunk is now 18 feet in diameter, and is surrounded by a balustrade of wood raised on a low wall coped with stone; and that its limbs are supported on 108 columns. The people of Neustadt are in the habit of sitting in this tree to eat fruit, &c.; and several gooseberry bushes have sprung up in the crevices and hollows of the bark, the fruit of which is sold to visitors.

“Evelyn mentions another remarkable lime at Cleves, cut in eight sides, supported on pillars, and having a room in the middle of the tree; and another at Tillburg, near Buda, in Hungary, growing in the middle of the street, and having its branches supported by 28 columns. Besides these trees, he notices ‘the famous tilia of Zurich;’ and ‘the linden of Schalouse, in Swisse, under which is a bower, composed of its branches, capable of containing 300 persons sitting at ease: it has a fountain set about with many tables, formed only of the boughs, to which they ascend by steps, all kept so accurately, and so very thick, that the sun never looks into it.’ (*Ibid.*) In Evelyn’s *Diary*, he tells us, that, in the year 1641, in the cloister garden of the Convent of St. Clara, at Bois le Duc, there was an overgrown lime tree, out of the stem of which, near the root, ‘issued five upright exceedingly tall suckers, or boles, the like whereof, for evenness and height, were never observed.’ (*Diary*, &c., 8vo edit., i. p. 38.) ‘An extraordinary and stately tilia, linden, or lime tree, there groweth at Depeham, in Norfolk, ten miles from Norwich, whose measure is this:—The compass, in the least part of the trunk or body, at about 6 feet from the ground, is 26 feet; near the ground, 46 feet; and at 3 feet, 36 feet. The height is about 90 feet.’ (*Ibid.*)

"In the cemetery of the hospital at Annaberg, in Saxony, is a very old lime tree, with enormous branches. The planter of this tree, who is buried under its shade, left a sum of money to have a sermon preached every Trinity Sunday under it. The tree is of enormous size, and is said, when young, to have been planted with its head downwards, and roots upwards.

"In Prussia, near Königsberg, are two large lime trees growing closely together on a grassy bank. The legend is, that beneath these trees are buried, a bride who died on her wedding day, and her husband, who did not long survive her loss, both lying in one grave. This tree is a favorite trysting-place for lovers. In the churchyard at Seidlitz, in Bohemia, are some old lime trees, the leaves of which are hooded; and the peasants affirm that they have been so ever since some monks from a neighboring convent were hanged on the trees. *Loudon's Arboretum Britannicum*, p. 2539.

RUSSIA, *Odessa, October 6, 1846.*—Since our arrival here, we have made a ten days' excursion to the south coast of the Crimea, so celebrated in this country as the "Italy of Russia." Landing from the steamboat at Yalta in the centre of the most beautiful part, we proceeded first to the westward, visiting Prince Woronzow's gardens at Aloupta, and along the new post road, crossed the ridge to Baidar Balaclava and Sevastopol, thence eastward behind the mountains through Bagtchisarai to Sympheropol, then turning southwards round the Tchahir-Dagh, came down upon the coast again at Aloushta, and back to Yalta, passing the government botanic garden at Nikita; a tour of about 180 miles through all the different varieties of soil, aspect, and climate of south Cr. nea, except perhaps that farther to the eastward the valleys are said to be rather more open. The mountains which border the south coast form a narrow ridge of bold rocks, rising to the height of 2000, 3000 and 4000 feet, or in some places to above 4700,* mostly calcareous, but often also schistous or porphyritic, with a very steep slope towards the sea, and sinking rather more gradually to the north, first into rocky wastes, like the garrigues of the south of France, but soon passing into steppes, like those of the main land. All this country behind the mountains is cold, barren, and uninteresting, either in an agricultural or horticultural point of view, however rich some parts may be to the geologist. The Tartar inhabitants, though a fine race of men, picturesque in their dress, healthy in their looks, with many really handsome women; yet in idleness, ignorance, and filthiness of habits and habitations, are to the Little Russians what these are to the true Russian mujiks. If the Russians possess these qualities in a positive degree, the Little Russians enjoy them in the comparative, but the Crim Tartars in the superlative degree. Such at least is the report of them we universally heard, and we could not but believe it, whether we saw the townspeople sitting on their shop-

boards cross-legged, or squatting smoking their pipes in the Tartar capital of Bagtchisarai; or the country people lazily crawling to the Sympheropol market in their rude oxen carts, in the construction of which no iron is used, and of which the wheels are never greased, or beating out the corn for the day's gruel with a wooden kind of club. In the great works carrying on for the dockyard and arsenal at Sevastopol, when the soldiers who worked at them were wanted for the Caucasus, and the completion given out by contract, the contractors found it hopeless attempting to employ the Tartars of the country as laborers, and imported a large body of Little Russians. With such a population, and nothing in the Crimea north of the mountains to induce proprietors to fix their residence there, it will probably be very long ere the rich soil of these steppes will be made really productive. In the market at Sympheropol, which is a very large one, the quantity of Water Melons, much as I had heard of them, exceeded what I could have imagined. Very fine ones were selling at 1d. and 1½d. a piece, and excellent Melons at about the same price; Grapes, notwithstanding the proximity of the south coast vineyards, few and not good; Cabbages the principal vegetable. One peculiarity in the market was the enormous quantity of cart wheels in pairs, with their axels. We had passed the day before, long trains of them, a pair of oxen drawing each a little waggon, in which sat, or rather lay, the driver, and each cart dragging after it from four to ten pair of wheels, rudely attached with wooden poles and pegs. No iron enters into the construction of either wheels or carts, the parts all being connected by wooden pegs, the tire not of one piece, as in the greater part of Russia, but of about half a dozen felloes, neither accurately shaped nor well put together, so that few wheels are in exact circle, and, altogether, lines of 20 or 30, or more, of these carts, with 100 to 150 pair of wheels, all squeaking on their ungreased axels, had a most singular effect. They come mostly from Kokkoz, a village in the wooded part of the mountains, said to contain 300 wheelwrights, who make above 18,000 wheels per annum, and in the whole village is but one blacksmith's forge.—*Gardeners' Chronicle*.

LESCHENAULTIA ARCUTA. *Drooping Leschenaultia*.—Half-shrubby Greenhouse-plant. Swan River.

A singular and truly handsome species, exceedingly different from every other known one, having copious, spreading, decurved branches, with innumerable branchlets, almost every one of which is terminated with a large red-purple and yellow flower: Raised by Messrs. Lucombe, Pince, and Co., of Exeter. The flowers have a good deal the appearance of those of the large shrubby *Polygalæ* of South Africa. Flowers in August.—*Botanical Magazine*.

RUSSIAN GRAIN.—As we approach Odessa, the vicinity of this great corn-mart is strongly indicated by the increasing numbers of the long lines of corn waggons on the various roads. Small, rudely-constructed, light waggons upon low wheels,

*The *Eubotany*, very near the sea, has been ascertained by Engelhardt and Parrot to be 787 fathoms, or 1722 fms., but the works I have had with me do not tell me what feet; probably Russian, which are nearly the same as English.

the wooden rim of one piece, generally without tire, carrying, each of them, but half a dozen sacks of corn, and drawn by a pair of oxen; each follow one another in strings of 20 to 40 or more, one man to every four, or sometimes to every three, carry the corn at a slow pace, often 200 or 300 miles; and although the oxen are turned out when they stop, to pick up what they can in the parched steppes or stubble by the roadside, yet as they often return empty, these long journeys alone must add much to the expense of the corn. Arrived in Odessa, the grain is lodged in warehouses situated in all parts of the town, even amidst the best streets, and from these warehouses to the port, light waggons with one horse and driver to each, are trotting up and down all day long, enveloping the town with clouds of dust, but giving an appearance of extraordinary activity. The port itself (that is to say, the jetty where the corn is transferred from these waggons to the lighters which take it to the ships in the harbor,) is all day long like a bee-hive. The loaded waggons, (if half-a-dozen sacks and a driver may be called a load) trotting down, and the empty ones trotting up, form each almost a continuous line, and the numbers of fine houses springing up in every direction, show that this activity is not unproductive. It is long indeed since I have seen a town of its size (about 60,000 inhabitants) show so many outward signs of prosperity as Odessa, and that without the dull, dirty-look of most business towns; the stone used for building is whitish, but too soft, and in architecture most of the warehouses look more like private houses, or even palaces, than anything else. Cranes and pullies are much too great an innovation to be generally used; the corn is carried up and down stairs by manual labor, so that not only is there nothing peculiar in the construction of the warehouses: but many houses are used for a year or two for corn till they are thoroughly dry, and then converted into private residences. The kind of wheat shipped is, I am told, chiefly the Arnauth or Tagonrog Wheat, which is precisely the same small-eared, bearded sort, which I have seen almost universally grow in Russia, and never met with in the west of Europe. A great quantity (as I am assured here) is sent to Italy to make the finest macaroni, and everywhere used to mix with other sorts, and give a fine, white appearance to bread. As it succeeds so well in all parts of temperate Russia, from Nijni Novgorod to Odessa, why should we not grow it also.—*For. Cor. Gardeners' Chronicle*.

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WINTER CULTURE OF THE MIGNONETTE.—Few flowers are more esteemed for bouquets in winter and early spring than the sweet-scented Mignonette (*Reseda odorata*;) it is also very useful for the decoration of the drawing-room and conservatory at those seasons of the year. Although the Mignonette is not a delicate plant, yet it is not generally seen in the perfection to which it might be brought by the simple method of culture I am about to describe. To flower at or soon after Christmas, the seed should be sown in the beginning of August, in pots of any convenient size. The soil should be good loam, moderately enriched with

rotten dung, and kept open by a pretty liberal intermixture with old mortar or lime rubbish. It is essential that the pots be thoroughly drained, and upon the drainage a handful (more or less, according to the size of the pots) of one year old pigeon's dung should be placed. After sowing the seed, set the pots where they will not require frequent waterings, too much moisture being extremely injurious to Mignonette; for this reason, therefore, it will be safer to place the pots in a frame or pit, where they may be covered by the lights in rainy weather. As the plants increase in size they should be gradually thinned, ultimately leaving three or five in each pot. The principal point to be attended to now is judicious watering; by this I mean giving water only when the plants really require water, and then in sufficient quantity to moisten the whole of the soil—not dribbling a few drops over the plants to-day to prevent them from being dry to-morrow—a practice too much followed with plants in pots. Pinch off any premature flowers that may appear, keep the pots free from weeds, and far enough asunder to prevent the plants from being crowded, and when they are removed to winter quarters, set them near the glass in an airy situation. A few of the plants might be placed in an intermediate house, or other situation rather warmer than a greenhouse, to come into bloom a little earlier than the rest. I have recommended the seeds to be sown in pots, which is the method I prefer; but if more convenient, a sufficient number of self-sown plants might be taken up and potted, only a few extras should be put in to allow for casualties, as the Mignonette transplants badly. The best Mignonette I ever saw grow was treated in this way; but as it is not every gardener who can procure pigeon's dung, I may add, that guano will be found an excellent substitute. This admirable fertiliser must, however, be applied in a liquid state, and not before the pots have become well filled with roots, when a small quantity of guano, given at intervals of a week or so, will increase the vigor of the plants in an extraordinary degree. A second crop might be sown in the beginning of September, and managed in the same manner. Single plants will attain a large size in 32 or 24 sized pots, if the main branches are pegged down as they grow, and the flowers are kept pinched off for a time.—*Whiting, in Journal of the Horticultural Society*.

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FORSYTHIA VIRIDISSIMA. Green-leaved Forsythia. *Hardy? Shrub.*—A bush with a very rich green color and handsome foliage, looking something like a Viburnum, was received from Mr. Fortune some time before he returned from his mission; but in the absence of flowers it could not be determined. Dried specimens have now supplied the deficiency, and proved it to be a new species of the genus Forsythia, of which one only had been previously known to botanists. That plant, the Forsythia suspensa of Vahl, was called a Lilac by Thunberg, who thus perceived its natural affinity, but was not happy in his identification of it, for although its leaves are often pinnated, yet its flowers grow in pairs from the axils of fallen leaves, instead of forming terminal panicles. It is

described as a very fine shrub, with deep yellow flowers, and growing from 8 to 12 feet high. According to Siebold and Zuccarini, who have figured it, there are two varieties, one with weeping branches, and the other with upright ones; both are said to have been obtained from China by the Japanese, who plant them along with evergreens for the sake of obtaining, from the varied appearance produced in the spring by this plant, a good background to the Peaches, Apricots, and Camellias, that blossom at the same time. This species is said to have been brought alive to Holland in 1833, by M. Verkerk Pistorius. (See Siebold and Zuccarini, *Flora Japonica*, vol. 1, p. 14.) The species obtained by Mr. Fortune is very distinct from the original *Forsythia*. Its leaves do not appear even to be pinnated, and instead of having an ovate form, they are strictly oblong, or oblong lanceolate. The branches are four-cornered instead of being terete, and are perfectly erect. The calyx is shorter and more membranous, and the flowers are smaller. It is no doubt a very different plant, and may be expected to become a great favorite when the specimens in the garden are old enough to flower; for then the branches will be found to be loaded, before the leaves, with yellow flowers as large as those of *Chimonanthus grandiflorus*. In its present state it forms a compact deep green bush, with oblong opposite leaves serrated near the point, but perfectly free from indentations below the middle. They emit a slight balsamic odor, and from their smoothness, want of lustre, and deep rich tint, are very handsome. The following are Mr. Fortune's observations on this species:—"This is a deciduous shrub with very dark green leaves, which are prettily serrated at the margin. It grows about 8 or 10 feet high in the north of China, and sheds its leaves in autumn. It then remains dormant like any of the deciduous shrubs of Europe, but is remarkable for the number of large prominent buds which are scattered along the young stems produced the summer before. Early in spring these buds, which are flower-buds, gradually unfold themselves, and present a profusion of bright yellow blossoms all over the shrub, which is highly ornamental. I first discovered it growing in the same garden with *Wiegela rosea*, which, I have said in another place, belonged to a Chinese Mandarin, on the island of Chusan, and was generally called the 'Grotto Garden' by the English. Like the *Wiegela* it is a great favorite with the Chinese, and is generally grown in all the gardens of the rich in the north of China. I afterwards found it wild amongst the mountains of the interior in the province of Chekiang, where I thought it even more ornamental in its natural state amongst the hedges, than when cultivated in the fairy gardens of the Mandarins. In England it is probable that it will be nearly hardy, but I advise the possessors of it in the first place to keep it in the greenhouse, and to plant it on the conservatory wall, until its constitution is proved in the Garden of the Society next winter. It is a free growing bush, and is easily increased by cuttings or layers."—*Journal of Hort. Soc.*

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BONES DISSOLVED IN SULPHURIC ACID.—I

applied them as manure to Strawberry plants in pots for forcing, and from the appearance of the plants, I am satisfied it is one of the very best manures for this fruit, and worthy of extensive trial. I have tried the effect of various manures on the Strawberry, but never had plants near so good as I have them this season. Should they produce fruit according to my expectation, I will send a sample for inspection.—*Robert Cassilis.*

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TO PREVENT HARES AND RABBITS BARKING TREES.—To one gallon stale urine add one quart powdered lime, and one pint foreign tar; warm the tar to mix with the above, then add as much cow's dung as will bring it to the consistency of thin paint. Apply it to the trees with a painter's brush.—*Gardeners' Chronicle.*

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CHINESE METHOD OF DWARFING TREES.—On the termination of the late Chinese war, our neighbors, the French, who shared in the interest so generally excited by the event, sent a mission to China, to form, if possible, a treaty of commerce with the Celestial Government. Confident hopes were entertained of the success of this mission; the finest silks and choicest wines formed part of the cargo of serious argument provided by these delegates of commerce. I believe *Messieurs les Chinois* were inaccessible to the above mentioned reasonings. *La mode Parisienne* only excited their merriment, and the wine their unequivocal dislike. However, it is not my present purpose to speculate on the commercial possibilities of this mission. In a short history of the voyage, by one of the party, I have found an amusing account of the method pursued in dwarfing trees, which perhaps may be more interesting to horticultural readers.

Immediately preceding the details of the dwarfing system, is an account of a fête day in Canton; that part which introduces and suggests the history of the dwarf trees, may, perhaps, without impropriety, be added here.

The *attachés* of the mission were very much astonished one morning to find the appearance of the two principal streets of Canton completely changed. Before each house was set a kind of stand or altar, of considerable size; upon the different steps of these stands were placed figures in porcelain and cardboard; by the side of these they remarked vases planted with fruit trees, scarcely a foot in height, the branches of which, twisted and distorted, bent under the weight of their fruit, which was of their natural size.

The figures of cardboard and porcelain, the most eccentric the brain of a Chinaman could invent, were in continual movement. Here a Mandarin, of the first class, rolled his haggard eyes, and gesticulated his arms; there a soldier sabred nothing right and left; further on a Chinese lady raised tenderly her languishing eyes, and fanned a large-headed man, who each moment hung out an immense tongue. Time after time the fantastic images stopped as if fatigued with their exercise, but then the proprietors of the stands gave them some strokes with a whip, and immediately the pantomime recommenced with renewed activity. There was enough in this to astonish the curious

spirit of the French travellers. What caused these images to march to the tune of the whip? And these little trees, so contemptible in appearance—the height of a foot!—carrying, each Orange-tree, 20 enormous Oranges? And each Apple-tree, 20 or 30 large Apples? For the images the explanation was not difficult to find. The Chinese had introduced into the interior of them one or two mice, which, on being stirred, struck some wires, and communicated thus the movement to the limbs expressly jointed to produce this effect. When the mice slept, a cut of the whip aroused and affrighted them, and so redoubled the vivacity of the gestures of the images. As for the dwarf trees, there was in that a mystery of horticulture, or rather of sylviculture, to divine. M. Renard had noticed on visiting the apartments of the Mandarins, similar little trees of the height of some few inches, pitiful to look at, unhealthy, distorted, and covered with excoriations without number, and a thing which astonished him,—the little foliage which ornamented the extremity of the branches, belonged to kinds that ordinarily attain an enormous size, such as the Elm, the Bamboo, and the Cypress. M. R. arrived at the following solution of these eccentricities:—That for the Chinese nothing is beautiful but that which is hideous; that a stunted shrub without leaves is a wonder that is worth all the forests in the universe; and so the principal occupation of the Chinese nurserymen is to combat Nature in everything that is beautiful and rich.

The cultivation of the dwarf trees is divided into two parts—that of the fruit and forest trees. That of the fruit trees rests upon a process already partly known in Europe; but of which the application is different. At the moment when a tree is in flower, the Chinese cultivator chooses a branch. It is well understood that he selects that which presents the most fantastic forms; he makes two circular notches, in a manner to raise a ring of bark of the length of about an inch; upon the part uncovered he applies fresh earth, that is held to it by means of a piece of cloth; each day he moistens the earth; soon the bark at the incision throws out roots, the branch becomes a tree, its fruit swells and ripens. Then the gardener cuts the branch at the end of the packet of earth, and plants it in a pot to send to the market. It is rare that this operation does not obtain a complete success. The fruit trees raised in this manner are in general the Litchi (*Dimocarpus litchi*), the delicious fruit of China; the Carambol, with octagonal fruit; the Lon-gan, a kind of Plum; the Orange, the Apple, Pear, *Ficus indica*, and a tree sacred in the pagodas, of which the fruit, a kind of Citron (*Citrus medica*, var. ?) is called by the Chinese, *Hand of Foo*, because it has the form of hand that the bonzes give to this god. The dwarfed trees are destined in general to ornament the pagodas, and the shops of the merchants on holidays. The cultivation of the forest trees, dwarfed, demands more care. It is not only in this case to get ready a branch, but it is a struggle they undertake with Nature, which consists in making hideous that which Nature has created beautiful, to lame and deform that which

she has made straight and well looking, to render mean and unhealthy that which she has produced vigorous and robust. The trees submitted to this system of stunting, are generally the Bamboo, the Cypress, and the Elm; the same as with the fruit trees, they choose a little branch as knotty and twisted as they possibly can find; they raise a ring of bark, and surround it with vegetable mould; at the same time they prune the tree of its handsomest branches, only preserving those which are zigzag; they then cauterise the wounds with hot iron. This first operation terminated, the gardener devotes all his care to his work, up to the day that he is satisfied of the presence of some roots. This success obtained, his kindness is changed to cruelty; from this day he refuses water to his charge, and it is only when he sees it nearly perishing, when its leaves fade, and turn yellow, that he consents to moisten a little the earth which keeps it alive; he cuts off the leaves, and only allows a few at the extremity of the branch to remain.

The tree thus treated, rests between life and death; it shrivels and bows its head, until the return of the sap; at this moment its state appears likely to be ameliorated; it is watered each day, its health is about to return; but, alas! for the tree, these attentions are but preliminary to further cruelties. The sap flows in abundance, and then the Chinaman makes at various distances transverse incisions, some almost circular. These cuttings continued, stop the ascent of the sap, which coagulating upon the wounds, causes swellings of bark frightful to behold; but which rejoices the eye of the Chinaman. When the time of the sap is passed, they put the shrub in *regime*. They then make new notches upon it, but perpendicular this time. They raise with a knife the bark near these notches, and introduce in the one honey, in the other sugar, in some colors, and even acid. Attracted by the smell, thousands of ants and flies come and gnaw, and prick the bark of the tree, while on the other side the acid burns and destroys wherever it touches. At length, after this treatment, when the branch has become a veritable monstrosity, covered with lichens, lumps, and deformities, and is recognised as capable of supporting its pitiful existence, they detach it from the tree; they shake away the earth that surrounds it, to place in a vase having the form of a large square jam-pot; the earth is then replaced by little gravel stones, that are just in number sufficient to maintain the tree straight in its pot. All the care necessary for the future is to moisten lightly the stones, when the plant appears to suffer.

The trees stunted in this manner, are very much prized by the mandarins, and are sold at a high price; but what is surprising is the extreme longevity they acquire. It is not rare that they attain 100 and 200 years. They are often transmitted by inheritance.

On some dwarfed trees that were sent to Her Majesty from China, in addition to the inflictions described in the account, were found numerous ligatures of wire, and the branches twisted and bent by the agency of the same material.—*W. I. Windsor, Gardeners' Chronicle.*

DOMESTIC NOTICES.

EXPORTATION OF ICE.—By some error of our proof reader, we were incorrectly made to speak of *William*, instead of *FREDERIC TUDOR, Esq.*, as the originator of this great enterprise. (See *Dec. No.*, p. 288.)

A friend in Boston writes us some corrections and some additional details regarding the ice business, which will interest our readers.

"To *FREDERIC TUDOR, Esq.*, belongs the whole merit of introducing abundant supplies of American ice into tropical countries. In the year 1805, forty years ago, Mr. TUDOR took passage in a brig belonging to himself, with his first adventure of this kind. From that time to this he has pursued the undertaking with the most invincible energy. His exertions have at last been crowned with the most complete success. The New-England ice is now, summer and winter, shipped to encounter a voyage of 16,000 miles—to cross the equator twice—and to be on the way between four and five months! The great ice-houses of this gentleman in the East Indies are always stocked, and the supplies in Calcutta, Madras, and Bombay, are always kept up from year's end to year's end.

"The source of the main supply of ice is not *Wenham Pond*, (called *Wenham Lake* in England,) but *Fresh Pond*, five miles from Boston. After this, as the business has increased, additional supplies have been taken from *Spy pond*, about the same distance. Then comes *Long pond*, and the last or latest which has come into use, is *Wenham Pond*. All these ponds are full of fine water, and give the purest ice.

"There may be about one hundred and fifty cargoes of ice shipped the present year, and the business appears every year to be extending. Mr. TUDOR's enterprise, as you will readily see, not only contributes in a high degree to the comfort and luxury of thousands in climates where pure ice was hitherto an unknown thing, but also now furnishes, and will long continue to furnish, employment to great numbers, both at home and abroad, whose labor is put in requisition by the various requirements of the 'Ice business.'"

THE "COOPER" APPLE.—Our friend, the Rev. C. SPRINGER of Meadow Farm, Ohio, has sent us for examination some interesting apples. We feel bound particularly to notice one variety, which is new to us, and is undoubtedly a fruit of great merit. This is labelled the "Cooper" apple.

The fruit is not known to us. It belongs to the class of autumn apples, of which that large and admirable fruit, the *Fall Pippin*, is the type. It has much the same flavor, and considerably resembles, in size and flavor, that fruit; yet it is a very distinct variety, remarkable not only for its excellent flavor, but for its lightness, its very small core and seeds, and the deep cavities at the eye and stalk. We have made an accurate description and drawing of this noble fruit, which we shall publish hereafter.

Mr. SPRINGER says in his letter, "by whatever name this apple may be known to pomologists, I consider it the best fall apple I have ever seen. The tree is a great bearer, and the fruit large and perfect. It is in great demand in our market. There are some who would buy a cartload of apples for the sake of getting a barrel of Coopers."

We have also a letter before us from the Hon. JAS. MATTHEWS of Coshocton, Ohio, full of interesting *pomological bits*, among which we note the following respecting this fruit:

"I do not believe that any apple cultivated in the Western States, excels the Cooper apple in flavor. You have doubtless seen the history of this variety, and placed it in your valuable collection. If not, I would especially recommend it to your attention."

Notwithstanding we have been favored by our correspondents west of the Alleghanies, most liberally with specimens of their apples, we have never seen the "Cooper" before, and trust Mr. MATTHEWS will favor us with the history of this really most excellent fruit.

We may add here, that parts of Ohio are undoubtedly in the highest degree favorable to the growth of the apple. Mr. SPRINGER's letter contains the following item of proof, which will interest orchardists every where:

"I have gathered this year from one acre of ground, about one hundred and fifty barrels of the finest and fairest apples grown in this vicinity, and about one barrel of the White Doyenne pears. The latter are now (Nov. 9th) in perfection. I had one Rhode-Island Greening five inches in diameter, weighing eighteen ounces and three-quarters. My trees have never been trimmed, and I raise larger and better fruit than any one who trims his trees."

COAL TAR.—We have recommended the coal tar of the gas-works to be applied to the trunks of fruit trees in winter, to protect them against mice and rabbits. In England this substance is very extensively used for this purpose, and we have also seen it used for two seasons on many trees, with perfect success.

In two instances, however, which have come under our notice, where it has been applied to very young trees, and been suffered to remain during the succeeding spring, it has had a decidedly injurious effect upon the trees.

We have taken pains to examine the coal-tar used in one of these cases, and find that it is very concentrated in strength, at least twice as strong as that generally made. Indeed, we believe it is such as is made and sold for coal-tar paint, and is so caustic as to be fatal to young and tender barked trees.

As it is difficult to give any ready test, by which those not familiar with coal tar may judge if it is strong or weak, we feel bound to caution orchardists against using the pure article as obtained from

the city gas-works, unless they know it to be a weak solution. If they have any doubts about it, the safest course is to dilute it with one-half milk before applying it to the trees.

If any of our readers have already used coal-tar on their trees, which they have reason to fear may be of the powerful kind alluded to, we would advise them to remove the same thoroughly from the trees with soap and a hard brush, as soon as the spring opens, and before the sap begins to move. It will not be likely to prove injurious so long as the tree is in a dormant state.

PEACH STONES FROM CHINA.—We are indebted to the kindness of C. N. TALBOT, Esq. of New-York, for a glass jar of peach-stones, just received by him from China, and which appear to be in excellent order. They are much smaller than those of our finest peaches; and since small size of the pit usually denotes large and succulent flesh, we trust these Chinese seeds may produce some new and valuable varieties. We shall give them every advantage of soil and situation.

TO HOLD UP EMBANKMENTS OR SLIDING BANKS.—*Dear Sir:* On the borders of my estate, I have a long ridge of shifting sand bank, continually caving away, being at once unsightly, and visibly lessening my "area of freedom." Can you inform me how I can guard against this mischief, by using any sort of tree or plant? If so, you will really much oblige, *An Admirer of your Journal.* New-York, Dec. 16.

ANSWER.—Abroad, the *Balsam Poplar*, or the *Balm of Gilead Poplar*, are, we learn, used with excellent success for fixing and holding up sliding banks. Cuttings of the young wood, two or three feet long, are struck all over the surface of the bank, a couple of feet apart. This is done in the month of April, and these cuttings soon strike root, and their roots form a thick mass that holds the soil firmly in its place. Their close proximity dwarfs the growth, so that they become bushes rather than trees. We recommend this course to our correspondent. These two kinds of Poplar are common in this neighborhood, and in many parts of the Union abound plentifully. Ed.

PROTECTING PEACH TREES AGAINST FROST.—In many districts of the country, where the Peach thrives well, the crop is very uncertain, because the blossoms are frequently destroyed by spring frosts. On that part of the Hudson, where we live and on the lake shores, injurious effects of late frosts are prevented by the ameliorating influence of the water. But in the interior, it is a question of very serious importance, how, if possible, to prevent this mischief, by which the fine promise of whole orchards of blossoms is destroyed in a single night.

Various modes have been tried. The most successful one, so far as we learn, is to retard the movement of the sap in the tree, and thereby, of course, the expansion of the blossom-buds, by heaping a large quantity of snow around the tree in winter, and covering the same with straw. By this means, the ground continues in a frozen state, and the tree

dormant, so long that, when its blossoms do expand, the season of frosts is gone by, and all danger is over.

We desire to call the attention of our obliging correspondents in the interior to this fact, now, as we are desirous of obtaining from them the result of their experiments or observations on this interesting subject, which, with their permission, we will gladly lay before the readers of this journal.

SALT APPLIED TO CELERY.—*Sir:* I perceive you and your correspondents advocate the use of salt. Applied in very moderate quantities, it is one of the best substances that can be used, especially in old gardens, long cultivated.

Salt has for a long time been applied to asparagus beds; the asparagus being a sea-beach plant, it is known to thrive wonderfully upon it. I write you this note, however, to say that I have for two years past used salt in growing Celery, with decided benefit. I apply a slight sprinkling of salt upon the top of the soil just before each earthing-up, while the blanching is going on. I have dug my crop of Celery, so treated, this fall, with great satisfaction, it being twice as large as that in my neighbor's garden adjoining, which is treated just in the same way, except the use of the salt.—Yours, &c. J. S. Philadelphia, Dec. 5, 1846.

COVERING HALF-HARDY PLANTS.—Please to inform me how shall I best cover half-hardy plants. Last winter I had some favorite climbing roses, too tender for our climate, bound up nicely with straw—the straw tied thickly and closely about the stems. When it was taken off in the spring, the wood looked fresh and healthy, but gradually it all died off. A hint regarding this, would oblige, *A Lady Reader.* Albany, Nov. 24, 1846.

[The straw was no doubt bound too tightly round the stems, which after being closely shut up from the air and light for several months, suffered on being exposed all at once in spring. Straw or matting, when used for covering tender plants, should be placed rather loosely about them, so as not to exclude entirely the air or light. It must be borne in mind that, in covering plants in winter, the object is not to make them warmer by shelter—for during a period of continued cold the temperature of all exposed objects is nearly the same—but to shade them from the sun, and prevent that sudden freezing and thawing, which destroy all half-hardy plants by bursting their sap-vessels.—Ed.]

BLOSSOMING OF FRUIT TREES.—We are indebted to Dr. BARRATT, of Middletown, Conn., for an interesting little pamphlet, of which he is the author, entitled, "*Report on the season of 1846, with a table showing the flowering of Fruit-trees; also tables of late spring and early fall frosts, and observations on the cultivation of the Gooseberry, &c.*" Dr. BARRATT has noted the weather for several years in connexion with its effects upon vegetation. What especially attracted our attention in this pamphlet, is a table of observations tending to prove the injurious effects of heavy rain occurring during the blossoming of fruit-trees. The

bad effects of late frosts are well known everywhere, but there are probably few persons who have attributed the failure of a crop, after a great show of blossoms, to copious and long continued rains when the trees are in bloom. Dr. BARRATT shows, we think conclusively, that this often happens—and that a failure of the crop of any particular fruit tree may be safely predicted, if the weather is decidedly rainy while the blossoms of that kind of fruit are expanded.

Our own observations lead us to coincide in this opinion. We well remember that last spring both cherry and plum trees were unusually laden with blossoms, in this neighborhood, and every one supposed there would be a large crop. The fruit apparently set in abundance, but very soon, being abortive, nine tenths of it dropped from the trees to the great surprise of all who remarked it, there being no frosts, but, on the contrary, continued fine weather after the blossoms had fallen. The cause, as Dr. BARRATT states, undoubtedly was the copious fall of rain, which, on referring back, we find took place during the greater part of the time when these trees were in bloom. The rain, under these circumstances, it is evident, washes away the pollen, and the fruit sets very imperfectly or not at all.

ROXBURY RUSSET and PUTNAM RUSSET.—There has been a good deal of conjecture and inquiry about the identity of these two fruits. A year or two ago the Putnam Russet was confidently claimed as a distinct western seedling. On the authority of Professor KIRTLAND, of Cleveland, we stated in our work on *Fruits*, that it had originated at Marietta. But discussion in the western agricultural papers, elicited the fact that beyond a doubt, the grafts of the so-called *Putnam Russet* were carried to the west from New England, by the Putnam family, whence the fruit obtained the latter title.

Some cultivators at the west still doubted the identity of these fruits—and we had ourselves doubts of their being the same.

We have however compared the two, this autumn, pretty carefully. Specimens of the "Putnam Russet" have been obligingly sent us by A. H. ERNST, Esq., of Cincinnati, Mr. ELLIOTT, of Cleveland, and Rev. C. SPRINGER, of Meadow Farm, Ohio. The specimens from the latter gentleman were from the Putnam orchard itself.

The Roxbury or Boston Russet is an apple well known here, but to satisfy ourselves, while we were in Boston the past autumn, we gathered specimens from large bearing trees in Roxbury, and in Dorchester, to compare them with the Putnam Russet.

The result is, that we cannot see any distinction between the two fruits, and are bound to consider them identically the same—that is, all the *Roxbury Russet*.

The "Putnam Russets," grown on rich soil at the west, are rather larger, and have shorter stalks than the Roxbury Russet usually exhibits here. But we find this apple unusually variable, both in shape and in the length of the stalk. Ordinary specimens are rather flat, with a somewhat slender

stalk—fine specimens are slightly elongated, with a short thick stalk. We gathered specimens from a Roxbury Russet tree at Dorchester, which in shape, stalk, flavor, &c., appeared to us precisely identical with the "Putnam Russets" we have received from Ohio.

In the nurseries last summer, we could distinguish no difference between the leaves, wood, and growth of these two sorts.

THE AUSTRIAN PINE, (*Pinus Austriaca*).—We have cultivated this foreign Pine for four or five years, and can recommend it strongly for ornamental plantations. It comes, we believe, from Hungary. It is perfectly hardy in this climate, and is one of the most rapid growing of all the Pine family. As an ornamental tree, it is exceedingly bold and picturesque—the foliage large, and the shoots striking in their habit of growth.

THE CHESTER (PA.) HORTICULTURAL SOCIETY.—The annual address of Dr. DARLINGTON, before this society, which we have upon our table, is a graceful and elegant production. This young society has commenced in a very spirited manner, and we have no doubt will really effect much for that part of Pennsylvania where it is located. The first annual exhibition held last September, was remarkable for the number of rare and fine exotics, as well as the variety and excellence shown in its fruit department.

In the report we notice with some surprise, among a large contribution from Mr. J. RUTTER, the following:—"Cherries preserved in ice, and still (Sept. 11,) fresh, viz: Napoleon, English Morello, Red-sour (Kentish) and Red Hearts!" How were they kept two months and more? There was also "a metallic tree bearing two apples, through which a current of galvanism was made to flow," that attracted much attention and excited a good deal of amusement amongst the young. It was contributed by Rev. Mr. WOODWARD.

APPLES FROM OHIO.—We are indebted to A. H. ERNST, of Cincinnati, for quite a collection of Apples, the growth of that neighborhood—which reached us in excellent order. Among them we find *Kaighns' Spitzenbergh*, described by Coxe, the specimens of very large size, and good quality. This apple is very indifferent here, and Mr. HANCOCK, of Burlington, New Jersey, informs us that in his state, it has become so imperfect as to be abandoned by many cultivators. We are glad to see that, in the west, it has renewed its growth, and taken a new lease.

"*Detroit Apple*."—The specimens sent us by Mr. ERNST under this name, appear to us to correspond in every characteristic with the *Monstrous Bellflower* of Coxe. Mr. Ernst informs us that he should coincide in this opinion, but that Coxe describes the growth of the wood as strong, while he finds it slender. It is undoubtedly an old apple, and a Bellflower.

"*Newtown Spitzenbergh* as we suppose it here, also extensively cultivated as the *Ox-eye*." A number of fine specimens were received with the

foregoing memorandum. They proved to be our well known Dutch *Fandervoren*—one of the finest apples, when in perfection, that this country can boast. The color, bloom, and especially the flavor of this fruit are *unmistakeable*. We never saw any so large however as these specimens from Cincinnati—and like most western fruits they are rather less regular in form, and more deeply indented at the eye and stalk.

It is worth while to remark, by the way, that no apple is so scarce at the present moment as the genuine *Newtown Spitzenbergh*. We do not know a bearing tree in this country, and if any of our readers can send us specimens of the fruit, we will consider it an especial favor.

Yellow Belle Fleur, *Pennock*, and *Winesap*, all correct, and of fine size and quality.

All's Russel, *Putnam Russel*, *White Pippin*, and several other unnamed sorts, completed the collection.

.....
NEW OR LITTLE KNOWN VEGETABLES.—One of the chief benefits to be conferred on the Horticultural world by a skilfully conducted Periodical, consists in the introducing to their notice valuable articles of foreign cultivation. I am gratified to find in the last number of the *Horticulturist*, that the Portuguese or ribbed Cabbage, (*Brassica costata*), has at last attracted the attention of our enterprising gardeners. After endeavoring repeatedly, but in vain, to persuade several of our seedsmen to order it from abroad, I am glad to find that it has at length made its own way to us. Is it not remarkable that a vegetable so highly recommended, and minutely particularized by Loudon, more than fifteen years ago, in his *Gardeners' Dictionary*, should now make its appearance among us a perfect stranger? It will not be unacceptable therefore to many of your readers, who may not possess this highly useful work, to reprint here his account of this valuable article.

"The *Couve Tronchuda*, *Tranxuda*, Portugal or large ribbed cabbage, *Brassica costata*, var *De Can*. *Chou vert à larges côtes*, Fr., was introduced (into England) in 1821, and the dwarf variety, known in Portugal by the name of *Tunercearice*, in 1822. As both are too tender to stand the severity of the British winter, the seeds should be sown in August, and the plants kept in a frame till spring, and planted out the same time as cucumbers for an early summer crop, and the succession must be kept up by spring and summer sowings. The ribs of the outer and large leaves, when divested of their green parts and well boiled, make a good dish, somewhat resembling Sea-kale. The heart or middle part of the plant, is however, the best for use; it is peculiarly delicate, tender and agreeably flavored, without any of the coarseness which often belongs to the Cabbage tribe. The dwarf sort is much the earliest, and when the lower leaves are taken off for use, it throws out numerous sprouts from the lower part of the stump, which is not the case with the other sort. Mr. Boas cultivated the *Tranxuda* precisely like the summer cabbage, sowing it in the autumn and again early in the spring. He advises a good stiff soil, and procuring the seed from Portugal, which he says may

be done through any wine merchant." *Loudon's Encyc. of Gardening*, p. 815.

Whilst upon this subject, let me express a wish that the enterprise of our seedsmen may also soon furnish us with the seeds of the celebrated *Telson Turnip*, and of the superior *Spinach of Flanders*, for notices of which, see the above work, pages 833, 834.

Another article of luxury to be introduced, is the *Hibiscus subdariffa*, for the excellent sherbet afforded by its crimson capsule. In the West Indies it goes by the name of *Red Sorrel*, and is not only employed as in Turkey, for the cooling and acidulous beverage it yields, but as a delicious preserve, rivaling the cranberry for tarts. Being a near relative of the okra (*Hibiscus esculentus*) it may be cultivated in a similar manner from the seeds; perhaps it would be advisable to start them in a hot bed, transplanting them as soon as all danger from frost has gone by. It would be invaluable in our southern states. The acid is so strong that the calyces and capsules, which are the parts used, must be first thrown into water to extract some of its intensity, and this water may then be sweetened and used as an agreeable drink. *J. W. K. Fishkill Landing, N. Y., Dec., 1846.*

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OPEN CULTURE OF FOREIGN GRAPES.—*Dear Sir:* I am much pleased with the *Horticulturist*; the contents of either of the numbers are of sufficient value for the whole year's subscription.

The article on "Mildew in Grapes," in your September number, for instance, is invaluable to me, should the wood ashes therein recommended prove a remedy for that troublesome disease.

I have many hundred vines of different foreign varieties; hitherto I have succeeded in open culture in preserving them from mildew to any great extent, by constant application of sulphur water. Should the wood ashes succeed, and I will give it a fair trial, it will save a great deal of time and labor.

I find the climate and soil here, very suitable for the culture of foreign grapes. In fact some of the kinds are a much surer crop, and more certain of ripening well with me, than the *Isabella* and *Catawba*.

The kinds I cultivate principally, are the *Golden Chasselas*, *White Sweetwater*, *White Muscadell*, *Green Swiss*, and *Black Cluster*. I have also a few of the *Black Hamburg*, but have been deterred from cultivating it to any extent, owing to its liability to mildew. If that can be prevented, it would be one of the best for open culture, as the bunches are loose, which is an indispensable requisite in case of heavy or continued rains at the period of ripening. Where the bunches are close, like the *Black Cluster*, they are very liable to rot during wet weather, unless severely thinned out, which is too troublesome and expensive, when so many better kinds can be cultivated that do not need it.

The *Esperione*, I think, will prove a valuable grape. One which I got from you last fall, fruited this year, and though surrounded by *Black Hamburgs*, which were nearly destroyed by mildew, it was not in the least attacked. It appears to be very

prolific and hardy. I have many other kinds in process of cultivation, which have not fruited yet, and I intend procuring all the best kinds, and giving them a fair trial, when I will discard all that are not suitable.

The Golden Chasselas is decidedly the best that I have tried yet. I got it from Prince & Son of Flushing as the White Chasselas, which it is not; it ripens here from the twentieth of August to the first of September, the same time as the Sweetwater, and in its growth, foliage and appearance of the fruit till fully ripe, it is impossible to tell them apart, except that it is even less liable to mildew; but after it gets ripe, it becomes of a more amber color; the great difference, however, is in the flavor, which is quite high, and slightly musky, so much so, that after eating it, the Sweetwater tastes insipid. Having several hundred vines of each of these kinds in bearing, I have been able to test them fully, and find no variation. The kind I got for the White Muscadell, is nearly identical with the White Sweetwater, though it appears to me to be higher flavored, and the berries rather larger.

The Green Swiss, or Fondant Vert, in some seasons, is an exquisite grape; but it is rather liable to mildew. This year, both the bunches and berries are smaller than usual, owing to that cause. It is very sweet and melting, and highly worthy of cultivation; it ripens about the first September.

From about one hundred vines of the Black Cluster, in full bearing and covered with fruit, I did not get a perfect bunch of any size; about half the fruit on each bunch rotting as they came to maturity, owing to heavy rains, and the closeness of the bunches preventing the fruit from drying. Heretofore, however, the fruit ripened well. As the vines are well established and strong, I intend grafting the greater part of them with the Golden Chasselas and other finer kinds.

I have a large number of seedling vines, hybrids between the different foreign kinds, and the Isabella

and Catawba, which promise well, and will be in bearing next year and the year following. I have also, this fall, saved a quantity of seed from the different kinds planted closely together, with the branches intertwined, from which I expect to get valuable hybrids, which may prove more suitable to our climate than the kinds now in cultivation.

I am perfectly convinced, that all the valuable table grapes, having open or loose bunches, and ripening by the twentieth of September, can, by judicious culture, be brought to great perfection in the open air, without the aid of glass or walls; in fact I consider a wall or close board fence, a detriment instead of a benefit, as it is a harbor for all kinds of insects, and prevents a free circulation of air and rain. They succeed best with me planted quincunx, in rows four feet asunder, and the vines four feet apart in the row; so that each vine can be trained separately, leaving room to pass round on all sides.

At the fall pruning, I leave four young shoots rising from the surface of the ground, or as near it as possible, two of which are left four feet long for bearers, and the other two cut down to two eyes each, to form the young wood for the next season. In the spring, after the vines are uncovered, I drive in four stakes, about five feet long, leaving four feet above ground, to each vine, in a line north and south, which is necessary in close cultivation, for the admission of heat and light, to two of which the bearing branches are tied vertically, the other two being for the young shoots, which, as they rise, are trained also vertically. The side shoots from the bearers, are trained at an angle of forty-five degrees, and tied to the other stakes, and stopped about three to four buds beyond the farthest bunch, the vine only occupying a space of three feet wide by four feet in height, as the stakes are set about a foot apart. I am your obt. ser't. *James Dougall. Rosebank, near Amherstburg, Canada West.*

MASSACHUSETTS HORTICULTURAL SOCIETY.

Exhibition of October 31, 1846.

FRUITS.—From M. P. Wilder, President of the Society, Pears, Beurre d'Angou, Bezi de la Motte, Duchesse d'Angouleme.

From S. Walker, Roxbury, Pears, Duchesse d'Angouleme, (fine) Urbaniste, and others without name.

From F. W. Macandry, a Pippin Apple.

From Geo. Walsh, Charlestown, Pears, Messieur John, Beurre Diel, Bon Chretien Fondante, Urbaniste and others.

From Daniel Putnam, Danvers, President's Apple.

From O. H. Mathers by Thomas Needham, Grapes, Black Hamburg, Syrian, white Chasselas, white Frontignan, Chasselas Musque, Muscat of Alexandria, Black Portugal, Black Lombardy, Black Frankendall, all fine.

From J. Fisk Allen, Pears, Napoleon, Verte Longue d'Au-tomme, Seckel, Duchesse d'Angouleme, and others for name; Grapes, Black Prince, Zinfandel, Whortly Hall seedling.

From J. Dudley by J. Owen, Pears.

A seedling Pear from Salem, was exhibited which the Committee have named the Ropes pear. The specimens tasted were very good, but the committee wish to see them another season, before giving a decided opinion of their merits.

For the Committee,

J. FISK ALLEN.

Exhibition of Nov. 7, 1846.

FLOWERS.—From J. L. Gardner, by Daniel Crowley, a fine display of Chrysanthemums.

From James Nugent, 12 varieties of Chrysanthemums.

Premiums on Chrysanthemums: The committee award the first premium of \$5 to Daniel Crowley, for the best twelve varieties.

To James Nugent, the second premium of \$4, for the second best twelve varieties.

For the committee,

JOSEPH BRECK.

FRUITS.—From E. Vose, Pears, Duchesse d'Angouleme, (very fine.)

From Josiah Lovett, 2d., Pears, Seckel, (fine,) Louise Bonne de Jersey, and Petre.

From S. R. Johnson, Beurre Diel and Dix Pears, (the latter very handsome.)

From S. R. Walker, Pears, Figue, (fine,) and Beurre Diel.

From J. M. Earle, Apples, Winter Spice, (?) Red Bough, (which we think will prove fine) and Patterson Harvey.

From M. P. Wilder, Pears, Dix, (fine,) Urbaniste, and Bezi de La Motte.

From Cheever Newhall. Grapes, SYRUP (very fine.) and Black Hamburg.
 From J. H. Allen, Pears, Verte Longue d'Automne.
 From A. D. W. Adams and Son, Apples and Pears.
 From S. D. Phillips, Apples of fine flavor, for a name.
 From Alexander McLean, Pears, Libaneste, Martha Sec.
 From D. L. La La, La Clere, Verte Longue d'Automne, M. Jean, White Doynene. (?)
 From J. M. Peas, Pears, Bezi de La Motte, Winter Nelis, and Rosecomb Meadow. Apples, Minister.
 For the Committee, OTIS JOHNSON.

Exhibition of Nov. 14, 1846.

FRUITS.—[From Samuel Downer, Jr. Pears, Beurre Diel, (fine.)
 From Otis Johnson, Pears, Duchesse d'Angouleme (fine,) omitted last Saturday.]

From Portland, for a name, by Samuel Walker, Pears, Doynene, (fine.)

From S. Walker, Pears, Figue (fine,) Winter Nelis, McLaughlin, Beurre Duval, Verte Longue d'Automne, Josephine, (?) Chaumontelle, Figue de Naples, Queen of the Low Countries, Beurre d'Aremberg, Fourcroy.

From J. Fiske Allen, Pears, Chaumontelle, (fine,) Lewis.
 From Samuel Pond, Pears, Duchesse d'Angouleme, Dix, Quinces, Musk. The specimens of pears and quinces were all fine.

From J. M. Ives, Apples, Aunt Hannah, which the committee pronounced of the first quality, Swaar, Rambo or Romanite.

From Dr. Joshua B. Flint, Louisville, Ky., by Dr. Gould, Apples, Crab, found growing in the forest; the committee on testing pronounced the fruit entirely worthless.

From John Washburn, Quinces, Orange or Apple, Musk, Pear, Portugal and a fine specimen without a name. The specimens were all extra in size.

For the Committee,

EBEN WIGHT.

Exhibition of Nov. 21, 1846.

FRUITS.—From Augustus Aspinwall, Pears, Duchesse d'Angouleme, fine.

From M. P. Wilder, Pears, M. le Cure, fine, Beurre d'Aremberg, Beurre Gris d'hiver Nouveau; the latter possesses a high flavor and promises well.

From J. H. Cobb, Pear, Catillac.

From Samuel Walker, Pear, M. le Cure, fine.

From Cheever Newhall, Pear, Colmar du Prantem, supposed to be identical with the Libaneste.

From F. W. Macomber, Pear, introduced as the Sultan Labourer. The specimen tasted was undoubtedly the d'Aremberg.

J. Wilcomb, Flushing, presented specimens of the Lawrence Pear of fine flavor; also a Pear of fair quality for a name.

From James Eustis, Apples, Tanned, and a variety without name; also the Ben Apple; the latter fine.

S. C. Ferry, of Georgia county, Ohio, presented handsome Apples found upon his land when a wilderness; the specimens were of pleasant flavor but dry.

From B. V. French, Apples, Conway, White Seek-no-Farther, and Nonsuch.

From Hovey & Co., Pear, Vicompt de Spielberg.

For the committee.

OTIS JOHNSON.

Exhibition of Dec. 5, 1846.

FRUITS.—From M. P. Wilder, President, Pears, Chaumontelle, fine; Beurre d'Aremberg, Columbia; Apples, three kinds from an unknown source, via Western Railroad—Cathead, very large, a handsome apple of Pearmain flavor, Fall Harvey, extra large.

From William Thomas, Boston, received from Springfield, Ohio, Apples, Sweet Vandevere, good flavor; Holland Pippin, Yellow Bellflower, Mundine, Ox-eye, red; ditto, white, of a good flavor; R. I. Greening, Gloria Mundi, (weighing 1½ lb.,) Virginia Red Streak, a large red apple, (seedling,) Greening, (fine) White Seek-no-Farther, Cannahan Favorite, high flavor; Yellow Newtown Pippin, Boyd's Favorite, (seedling,) Yellow Ox-eye, Black Apple, Vinesap, Michael Henry Pippin, Cart-house, French Pippin, Seek-no-Farther, red. The apples were raised by Messrs. J. Boyd, J. C. Wood, J. S. Wood, J. R. Miller, and T. S. Wood, Springfield, Ohio. The committee were pleased in having so good an opportunity as the occasion offered to test the flavor, and compare the size with like kinds grown in this vicinity. The specimens were all of extra size.

From William Stearns, Pears, Lawrence, Winter Nelis, (fine,) Bishop's Thumb, G. Morceau, (fine,) Wilkinson, St. Germain, (fine) Marsh, (native,) Bleeker's Meadow.

From Samuel Downer, Pears, Passe Colmar, (fine.)

From Josiah Lovett, 2d., Pears, Winter Nelis, (fine,) Beurre Diel, (fine;) Apples, Minister.

From S. W. Cole, Apple, Cranberry.

For the Committee,

EBEN WIGHT.

PENNSYLVANIA HORTICULTURAL SOCIETY.

The usual stated meeting of this Society was held on Tuesday evening, December 15, 1846,—
 The President in the chair.

Owing to the severity of the weather, there was little display on this occasion. Two tables of choice vegetables, and two fine Bouquets, a dish of Passe Colmar Pears, and another of Apples constituted the objects shown. Premiums for the vegetables were awarded to Anthony Felten; for the best bouquet, to Wm. Hall, gardener to Caleb Cope, and for the next best, to James Bisset, gardener to James Dundas: A special premium of one dollar to J. B. Baxter for the Pears, and another of the same amount to Wm. Johns for Apples.

The Library Committee submitted their annual Report, from which it appeared that forty-six volumes had been added during the past year, and that the library contains nearly seven hundred volumes, all on appropriate subjects.

The committee for establishing premiums, reported a schedule for the ensuing year, which was ordered to lie over for consideration.

A communication to the president, from Professor Walter R. Johnson, purporting that he intended to deliver a course of eight lectures on Chemistry as applied to Agriculture and Horticulture, at the Academy of Natural Sciences, commencing January 6th, when on motion

Resolved, That this Society regards the subject of Chemistry as applied to the cultivation and products of the field and garden, and to the uses of the same for economical and mental purposes, as of the highest interest, not only to this Society, but to the whole community who are the consumers and admirers of such products.

Resolved, That the Society has heard with great pleasure the announcement by Professor Johnson, of his intention to deliver a course of lectures on the above important subjects, and that the same be recommended to the favorable consideration of our members.

Resolved, That a committee of five members be appointed for the purpose of obtaining subscribers to the above mentioned course of lectures.

The President appointed Dr. Watson, Percival, Mackenzie, Kilvington and James, as said committee.

Mr. Jos. T. Thomas presented a copy of Fremont's Expedition to the Society. On motion ordered that the thanks of the Society be tendered to the donor for the acceptable gift.

Members elected, D. B. Kelly, Samuel W. Harding, and John Field.

On motion adjourned.

THO. P. JAMES,
 Recording Secretary.

THE
Horticulturist
AND
THE GARDEN

JOURNAL OF RURAL ART AND RURAL TASTE.

VOL. I.

FEBRUARY, 1847.

No. 8.

"THERE WAS a certain householder which planted a vineyard, and *hedged* it round about." What better proof can we give, than this sacred and familiar passage, of the antiquity, as well as the wisdom, of making hedges. But indeed the custom is older than the christian era. Homer tells us that when Ulysses, after his great deeds, returned to seek his father Laërtes, he found the old king in his garden, preparing the ground for a hedge, while his servants were absent,

"To search the woods for sets of flowery thorn,
Their orchard bounds to strengthen and adorn."

POPE'S ODESSEY.

The lapse of 3000 years has not taught the husbandman or the owners of orchards and gardens, in modern times, any fairer or better mode of enclosing their lands, than this most natural and simple one of *hedging it round about*. Fences of iron or wood, carefully fashioned by art, are fitting and appropriate in their proper places—that is, in the midst of houses and great cities—but in the open, free expanse of country landscape, the most costly artificial barrier looks hard and incongruous beside the pleasant verdure of a live hedge.

Necessity, it is often said, knows no law, and the emigrant settler on new lands, where

stone and timber are so abundant as to be the chief obstacles to the progress of his labors on the soil, must needs employ for a long time, rail fences, board fences, and stone walls. But in most of the Atlantic states these materials are already becoming so scarce, that hedges will soon be the most economical mode of enclosing grounds. In the Prairie lands of the west, hedges must also, from the original and prospective scarcity of timber, soon be largely resorted to for all *permanently* divided grounds—such as gardens and orchards.

Touching the charms which a good hedge has for the eye, they are so striking, and so self-evident, that our readers hardly need any elaborate inventory from us. That clever and extraordinary man, William Cobbett, who wrote books on gardening, French grammar and political economy, with equal success, said, in his usual emphatic manner, "as to the beauty of a fine hedge, it is impossible for any one who has not seen it, to form an idea; contrasted with a wooden, or even a brick fence, *it is like the land of Canaan compared with the deserts of Arabia*."

The advantages of a hedge over a common fence, besides its beauty, are its dura-

bility, its perfect protection against man and beast, and the additional value it confers upon the land which it encloses. A fence of wood, or stone, as commonly made, is, at the best, but a miserable and tottering affair; soon needing repairs, which are a constant drain upon the purse; often liable to be broken down by trespassing Philistines; and, before many years, decaying, or so far falling down, as to demand a complete renewal. Now a good hedge, made of the two plants we shall presently recommend, will last *forever*; it is an "everlasting fence," at least in any acceptance of the word known to our restless and changing countrymen. When once fully grown, the small trouble of annual trimming costs not a whit more than the average expense of repairs on a wooden fence, while its freshness and verdure are renewed with every vernal return of the "flower and the leaf."

As a protection to the choicer products of the soil, which tempt the spoiler of the orchard and the garden, nothing is so efficient as a good hedge. It is like an impregnable fortress, neither to be scaled, broken through, nor climbed over. Fowls will not fly over it, because they fear to alight upon its top; and men and beasts are not likely to make more than one attempt to force its green walls. It shows a fair and leafy shield to its antagonist, but it has thousands of concealed arrows ready at the moment of assault, and there are few creatures, however bold, who care to "come to the *scratch*" twice with such a foe. Indeed a well made and perfect thorn hedge is so thick that a bird cannot fly through it.

"The hedge was thick as is a castle wall,
So that who list without to stand or go,
Though he would all the day pry to and fro,
He could not see if there were any wight
Within or no."—CHAUCER.

"This is all true," we hear some impa-

tient reader say; "hedges are beautiful, excellent, good; but what an age they require—five, six, seven, years—to be cut down—the poor things—once or twice, to be kept back every year with shortening and shearing, and only to reach the height of one's head, with such an outlay of time and trouble. Ah! it is too tedious, I must build a paling—I shall never have patience to wait for a hedge!"

Build a paling, friend; nature does not get up hasty job-work, like journeymen carpenters. But at least be consistent. Fill your garden with annuals. Do not sow anything more lasting, or asking longer leases of time than six weeks—beans and summer sun-flowers. Breed no stock, plant no orchards, drain no meadows, and—set no hedges! Leave all these to wiser men, or rather be persuaded of the wisdom of doing in the best way, what tillers of the earth have not learned to do better after a lapse of centuries!

But there are also persons, readers of ours, who must be treated with more respect. They will tell us that they have more reason in their objections to hedges. They admire hedges—they have planted and raised them. But they have not succeeded, and they have great doubts of the possibility of making good hedges in the United States. We know all the difficulties which these cultivators have experienced, for we have made the same trials, and seen the same obstacles ourselves. But we are confident we can answer their objections in a few words. *THE HAWTHORN (Cratægus) cannot be depended upon as a hedge plant in this country.*

Hundreds of emigrants from Great Britain, familiar all their lives with hawthorn hedges and their treatment, and deploring the unsightliness of "posts and rails" in

America, have made hedges of their old favorite, the common English Hawthorn, and given them every care and attention. Here and there we see an instance of success; but it cannot be denied that, in the main, there is no success. The English Hawthorn is not adapted to our hot and bright summers, and can never be successfully used for farm hedges.*

But there are many species of *native* Hawthorn scattered through our woods. Will not these make good hedges? We answer, excellent ones—nothing can be much better. Almost any of them are superior to the foreign sort for our climate. We have seen hedges of the two species known in the nurseries as the Newcastle thorn (*Cratægus crus-galli*) and the Washington thorn, (*C. cordata*) that realized all we could desire of a beautiful and effective verdantless fence.

A few years ago, therefore, we strongly recommended these native thorns—we hoped to see them planted in all parts of the country. But we are forced to admit now that there is a reason why we fear they will never make permanent hedges for the country at large, and for farm purposes.

This is their liability to be utterly destroyed by that insect, so multiplied in many parts of the country, the *apple borer*. Wherever there are old orchards, this insect sooner or later finds its way, and sooner or later it will attack all the Hawthorns, whether native or foreign, for they all belong to the same family as the apple tree, and are all its favorite food. Fifteen years ago, a person riding through the lower part

of New-Jersey and Delaware, would have been struck with the numerous and beautiful hedges of Newcastle and Washington thorns. Whole districts, in some parts, were fenced with them, and nursery-men could scarcely supply the demand for young plants. Now we learn that whole farms have lost their hedges by the *borer*, which in some places attacked them so suddenly, perforating and girdling the stems near the ground, that in two seasons, sometimes indeed in one, the hedge would be half killed. Of course the planting of thorn hedges is almost abandoned there, and we are assured by growers of the plant in those states, who frequently sold hundreds of thousands, that there is now no demand whatever for them.*

We do not doubt that there are many sections of the country where good Hawthorn hedges of the best native species, may be grown. In some places this fatal foe to it may never appear—though it follows closely in the steps of every careless orchardist. In *gardens* where insects are closely watched, it is not very difficult to prevent their ravages upon the thorn plants. But what we mean now to point out as distinctly as possible, is this—that no species of Hawthorn, or *Cratægus*, is likely ever to become a hedge plant of general use and value to farmers in America.

What we want in a hedge plant for this country is, vigor, hardiness, longevity, and a sap and bark either offensive, or offering no temptations to any destructive insects. Are there such plants? We think we may now, after the matter has been pretty thoroughly tested, answer yes; and name the

* We know there are exceptions. We have ourselves about 1000 feet of excellent hedge of this plant. And we saw, with great satisfaction, last summer, on the fine farm of Mr. GODFREY, near Geneva, N. Y., more than a mile of promising young hedge of the English thorn. But the soil and climate there, are peculiarly favorable. These are exceptions to thousands of instances of total failure.

* We recall to mind an instance on the Hudson, where three years ago we saw a very beautiful hedge of the Newcastle thorn—almost as handsome in its glossy foliage as Holly itself. During the past summer we again beheld it, nearly destroyed by the insidious attacks of the borer.

BUCKTHORN, and the OSAGE ORANGE; the former for the northern, and the latter for the southern portions of our country. These plants are both natives. As they may not be familiar to many of our readers, we shall, before entering upon the planting of hedges, briefly describe them, and give correct sketches of their leaves and growth, so that they may be identified by any person.

THE BEST HEDGE PLANTS.

I. THE BUCKTHORN.

Rhamnus catharticus.—L.

The Buckthorn is a deciduous shrub growing from 10 to 15 feet high, bushy, or with numerous branches. The bark is grayish brown; the leaves are about an inch or an inch and a half long, dark green, smooth, ovate, and notched or serrated on the edges, and are placed nearly opposite each other on the branches. There are no independent thorns properly speaking, but the end of each year's shoot terminates in a sharp point or thorn. (See fig. 80.) The blossoms are small and yellowish green. They are succeeded by numerous round black berries, which ripen in autumn, and hang till frost, and give the plant something of an ornamental appearance. The roots are unusually black in color, and are very numerous.

The Buckthorn is a native of the north of Europe, Asia and North America. It is not a common shrub in the woods in this country, but we find it very frequently in this neighborhood, and in various parts of Dutchess county, N. Y., as well as on the borders of woods in Massachusetts.*

The bark and the berries of the Buckthorn are powerful cathartics. The sap of

*Some botanists consider it a foreign plant, introduced and naturalized in this country. But we have found it in solitary and almost inaccessible parts of the Hudson Highlands, which forbids such a belief on our part.



Fig. 80. The Buckthorn.

the berries, mixed with alum, makes the colour known to painters as sap-green, and the bark yields a fine yellow dye.

As a hedge plant, the Buckthorn possesses three or four points of great merit. In the first place, its bark and leaf are offensive to insects, and the borer, the aphid, and others, which are so destructive to all Hawthorns in many parts of our country, will not touch it.

In the second place, it is remarkable for its hardiness, its robustness, and its power

of adapting itself to any soil. It will bear any climate, however cold, for it grows wild in Siberia; hence it will never suffer, as the English thorn has been known to do, with an occasional winter of unusual severity. We have seen it growing under the shade of trees, and in dry and poor soil, as well as thriving in moist and springy soil; and in this respect, and in its natural rigid *thicket-like* habit, it seems more admirably fitted by nature for a northern hedge plant than almost any other. In the third place, it bears the earliest transplanting, has great longevity, and is very thrifty in its growth. We have already remarked that it is well supplied with roots. Indeed its fibres are unusually numerous even in seedlings of one year's growth. Hence it is transplanted with remarkable facility, and when treated with anything like proper care, not one in five thousand of the plants will fail to grow. It is scarcely at all liable to diseases, and no plant bears the shears better, or gives a denser and thicker hedge, or is longer lived in a hedge. Its growth is at least one-third more rapid than that of the Hawthorn, and the facility of raising it, at least half greater.

Lastly, it is one of the easiest plants to propagate. It bears berries in abundance. These, if planted in autumn as soon as they are ripe, (or even in the ensuing spring) will germinate in the spring, and if the soil is good, give plants from a foot to 20 inches high the first year—which are large enough for transplanting the next spring following. The seeds of the Hawthorn do not vegetate till the second year, and the plants properly require to be transplanted once in the nurseries, and to be three years old, before they are fit for making hedges. Here is at once a most obvious and important saving of time and labour.

It is but a simple matter to raise Buckthorn plants. You begin by gathering the seeds as soon as they are ripe, say by the middle of October.* Each berry contains 4 seeds, covered with a thin black pulp. Place them in a box or tub; mash the pulp by beating the berries moderately with a light wooden pounder. Then put them in a sieve, pour some water over them, rub the seeds through, and throw away the skin and pulp. Two or three rubbings and washings will give you clean seed. Let it then be dried, and it is ready for sowing.

Next, choose a good bit of deep garden soil. Dig it thoroughly, and give it a good dressing of manure. Open a drill with the hoe, exactly as you would for planting peas, and scatter the seed of the Buckthorn in it, at an average of two or three inches apart. Cover them about an inch and a half deep. The rows or drills may, if you are about to raise a large crop, be put three feet apart, so that the horse cultivator may be used to keep the ground in order.

In the spring, the young plants will make their appearance plentifully. All that they afterwards require is a thorough weeding, and a dressing with a hoe as soon as they are all a couple of inches high, and a little attention afterwards to keep the ground mellow and free from weeds. One year's growth in strong land, or two, in that of tolerable quality, will render them fit for being transplanted into the hedge rows.

If the Buckthorn has any defect as a hedge plant it is this; while young it is not provided with strong and stout roots like the hawthorn. Its thorns, as we have already said, stand, at the point of each

* The Buckthorn is pretty largely cultivated for its berries at the various Shaking Quaker settlements in this State and New England; and seeds may usually be procured from them in abundance, and at reasonable prices.

shoot of the old wood. Hence it is that a buckthorn hedge does not appear, and is not, really well armed with thorns till it has attained its full shape, and has had a couple of seasons' shearing. After that the hedge being well furnished with the ends of the shoots, it presents thorns on every face, and is a thorough defence. Besides this, it is a stronger and stouter plant than the thorn, and offers more absolute resistance than the latter plant. Though it may be kept low, yet it makes a most efficient shelter if allowed to form a high hedge. One of the largest and oldest specimens in New-England is that at Roxbury, planted by the late HON. JOHN LOWELL, and still growing on the estate of his son. It is very strong, and if we remember right, twelve or fifteen feet high.*

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II. THE MACLURA, OR OSAGE ORANGE.

Maclura aurantiaca.

THE Osage Orange, or Maclura, grows wild in abundance in the state of Arkansas, and as far north as the Red River.

It is one of the most striking and beautiful of American trees. Its foliage is not unlike that of the orange, but more glossy, and polished; indeed it is of a bright varnished green. It grows luxuriantly, about thirty or forty feet high, with a wide and



Fig. 81. *The Osage Orange.*

spreading head. The flowers are small and inconspicuous, pale green in color, those preceding the fruit resembling a little ball, (see figure.)* The fruit (Fig. 82.) itself is about the size and shape of an orange, yellow at full maturity, and rough on the outside, not unlike the seed of the button-wood or sycamore. It hangs till October, is not eatable, but is striking and ornamental on a large tree. This tree was first introduced into our gardens, where it is now well known, from a village of the Osage Indians,

* Mr. Derby of Salem, was one of the first persons to employ the Buckthorn, and to urge its value upon the public. From the *Transactions of the Essex Agricultural Society for 1812*, we extract some of his remarks relating to it: "I do not hesitate to pronounce the Buckthorn the most suitable plant for hedges I have ever met with. It vegetates early in the spring, and retains its verdure late in autumn. Being a native plant, it is never injured by the most intense cold, and its vitality is so great that the young plants may be kept out of ground for a long time, or transported to a great distance without injury. It never sends up any suckers, nor is disfigured by any dead wood. It can be clipped into any shape which the caprice or ingenuity of the gardener may devise, and it needs no plashing or interlacing, the natural growth of the plants being sufficiently interwoven. It is never cankered by unskilful clipping, but will bear the knife to any degree."

* The male and female flowers are borne on separate trees.

which, coupled with its general appearance, gave rise to its popular name. The wood is full of milky sap, and we have never seen it attacked by any insects.

The Osage Orange, when treated as a hedge plant, has many excellent characteristics. It is robust, vigorous, and long lived. It sends out a great abundance of branches, bears trimming perfectly well, is most amply provided at all times with stout thorns, and its bright and glossy foliage gives it a very rich and beautiful appearance. It grows well on almost any soil, and makes a powerful and impenetrable fence in a very short time. Though it will bear rough and severe pruning, and is therefore well adapted for farm fences, yet it must be regularly trimmed twice every year, and requires it even more imperatively than other hedge plants, to prevent its sending out strong shoots to disfigure the symmetry of the hedge.

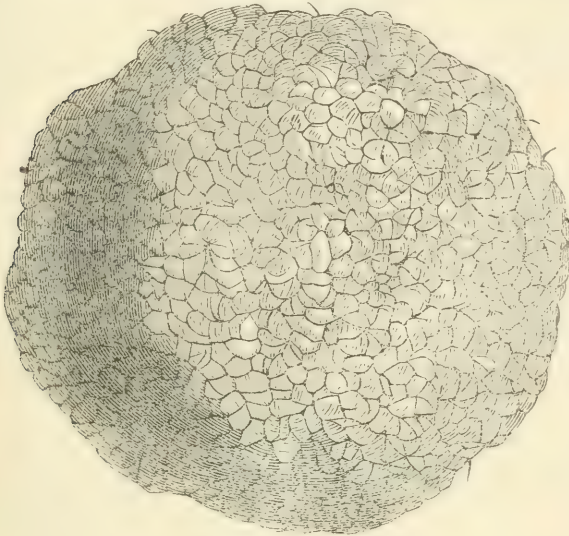


Fig. 82. *Fruit of the Osage Orange Tree.*

A great many trials have been made within the last ten years, in various parts of the country, with the Osage Orange as a hedge plant. The general result, south of this, has been in the highest degree favorable. Many who have failed with all species of hawthorn, have entire faith in the value of this plant, and we have no longer a doubt that it is destined to become the favorite hedge plant of all that part of the Union lying south and west of the state of New-York.*

* The Osage Orange is hardy in our own grounds, where we have cultivated it for many years. In New England it will probably be found too tender in winter, though there is an excellent young hedge of it at Belmont Place, the residence of J. P. CUSHING, Esq., near Boston, which we were told the past season, has proved quite hardy. Pruning in hedge form, by checking its luxuriance, will render any partially tender shrubs more hardy. It may be safely laid down as a rule, judging from our own observations, that the Osage Orange will succeed perfectly as a hedge, wherever the Isabella grape will ripen in the open air without shelter or protection. This is a better and safer guide than a reference to parallels of latitude.

The Osage Orange is not yet sufficiently well known to be a cheap plant in the nurseries.* But this is because it is not yet sufficiently in demand. It is easily propagated and will no doubt soon be offered at very moderate rates.

This propagation is done in two ways; by the seed, and by the cuttings of roots.

The seed is produced plentifully by the female trees. There are large bearing trees in the old Landreth and McMahan gardens, near Philadelphia. But it is not difficult now to have resort to those of native growth. We learn that this tree is so common in the neighborhood of Columbus, Hempstead Co., Arkansas, that the seeds may be had there

* Messrs. Landreth and Fulton of Philadelphia, have a stock of it for sale at \$12 per 1000. The usual price for Hawthorns and Buckthorns is \$6 per 1000; but the latter may be raised at a cost of not more than \$3.

for the expense of gathering them. They should be gathered at the latter part of September, and the clean seed, packed in an equal quantity of dry sand, may be sent to any part of the Union before planting time. A quart will produce at least 5000 plants. The seed may be planted in broad drills and treated just as we have already recommended for that of the Buckthorn. But the plants are seldom fit for hedge planting till the second year.

The other mode of propagation is by the roots. Pieces of the roots, of the thickness of one's little finger, made into cuttings three or four inches long, and planted in lines, in mellow soil, with the top of the root just below the surface, will soon push out shoots, and become plants. The trimmings of an hundred young plants, when taken up from the nursery for transplanting, will thus give nearly a thousand new plants.

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PLANTING AND REARING THE HEDGE.

Having secured the plants, the next step necessary is to prepare the ground where the future hedge is to be formed.

For this purpose a strip must be marked out, three or four feet in width, along the whole line where the hedge is to grow. This must be thoroughly trenched with a spade, eighteen inches deep, if it is to be a garden hedge; or sub-soil ploughed to that depth, if it is to be a farm hedge. We know many persons content themselves with simply digging the ground in the common way, one spade deep; but we take it for granted no readers of ours will hesitate about the little additional trouble of properly trenching or deepening the soil,* when they may be assured that they will gain just one-half in

the future growth and luxuriance of the hedge.

It is the custom in England to plant hedges on a bank with a ditch at one side, to carry off the water—and some persons have, from mere imitation, attempted the same thing here. It is worse than useless in our hot and dry climate. The hedge thrives better when planted on the level strip, simply because it is more naturally placed and has more moisture. If the bank and ditch is used, they are continually liable to be torn away by the violence of our winter frosts.

As regards the season, the spring is the best time for the northern states—the autumn for the southern. Autumn planting at the north often succeeds perfectly well, but the plants must be examined in the spring; such as are thrown out of place by the frosts require to be fixed again, and this often involves a good deal of trouble in strong soil. Early spring planting, therefore, for this latitude is much preferable on the whole.

A good dressing of any convenient manure that is not so coarse as to be unmanageable in planting, should be put upon the soil and turned under while the trenching is going on. The soil must be thoroughly pulverized and freed from stones, lumps, and rubbish, before the planting begins.

The plants are now to be made ready. This is done in the first place, by assorting them into two parcels—those of *large* and those of *small size*. Lay aside the smaller ones for the richest part of your ground and plant the larger ones on the poorest of the soil. This will prevent that inequality which there would be in the hedge if strong and weak plants were mixed together, and it will equalize the growth of the whole plantation by dividing the advantages.

* Those who may be fortunate enough to possess rich deep bottom or alluvial lands, are the only persons who need not be at the trouble of trenching their soil.

The plants should then be trimmed. This is speedily done by cutting down the top or stem, to within about an inch of what was the ground line, (so that it will, when planted again, have but an inch of stem above the soil,) and by correspondingly shortening all the larger roots about one-third.

If you have a good deal of planting to do, it is better to bury the plants in a trench close at hand, or *lay-them-in-by-the-heels*, as it is technically called, to keep them in good order, till the moment they are wanted.

The hedge should be planted in a double row, with the plants placed, not opposite to each other, but alternate—thus :

* * * * *

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The rows should be six inches apart, and the plants one foot apart in the rows. This will require about 32 plants to a rod, or 2000 plants to 1000 feet.

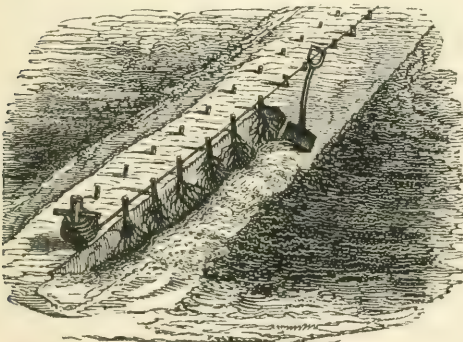


Fig. 83. Manner of Planting Hedges.

Having well pulverized the soil, set down the line firmly for the first row, and with a spade, throw out a trench about eight or ten inches deep, keeping its upright or firm bank next to the line. Drop the plants along the line at about the distance they will be needed, and then plant them twelve inches apart, keeping them as nearly as possible in a perfectly straight line ; for it is

worth bearing in mind, that you are performing an act, the unimpeachable *straight-forwardness* of which will no doubt be criticised for a great many years afterwards. Press the earth moderately round the stem of the plant with the foot, when the filling-in of the pulverized soil is nearly completed. And, finally, level the whole nicely with the hoe.

Having finished this row, take up the line and fix it again, six inches distant ; open the trench in the opposite direction, and set the plants in the same manner. This completes the planting. The next point, and it is one of great importance, is the *cultivation* which the young plants require until they become a hedge. It is indeed quite useless to plant a hedge, as some persons do, and leave it afterwards to be smothered by the evil genius of docks and thistles. A young hedge requires about the same amount of cultivation as a row of Indian corn. The whole of the prepared strip of ground must be kept loose with the hoe, and free from weeds. Then light dressings for the first two or three summers will be required to effect this, and the thrifty and luxuriant state in which the plants are thereby kept, will well repay it, to the eye alone. After that, the branches of the hedge will have extended so, as in a good degree, to shade and occupy the ground, and little more than a slight occasional attention to the soil will be required.

A few words must be given to the trimming and clipping of our now established hedge.

The plants having, before they were planted, been cut off nearly even with the surface of the ground, it follows, that, in the ensuing spring, or one year from the time of planting, they have made many shoots from each stem. Let the whole of

this growth, then be cut down to within *six inches* of the ground.

The following spring, which will be two years of growth, cut back the last season's shoots, leaving only one foot of the current season's growth. This will leave our hedge, altogether, eighteen inches high.

The third year shorten back the tops so as to leave again one foot of the year's growth. The hedge will now be two and a half feet high.

This course must be pursued every spring until the hedge is of the desired height and form, which will take place in five or six years. The latter time is usually required to make a perfect hedge—though the Buckthorn will make a pretty good hedge in five years.

This severe process of cutting off all the top at first, and annually shortening back half the thrifty growth of a young hedge, seems to the novice, like an unnecessary cruelty to the plant, and trial of one's own patience. We well remember as a boy, how all our indignation was roused at the idea of thus seeing a favorite hedge "*put back*" so barbarously every year. But it is the "*inexorable must*," in hedge growing. Raising a hedge, is like raising a good name; if there is no base or foundation for the structure, it is very likely to betray dreadful gaps at the bottom before it is well established. In a hedge, the great and all important point is to make a broad and thick base. Once this is accomplished, the task is more than half over. The top will speedily grow into any shape we desire, and the sides are pliant enough to the will of him who holds the shears. But no necromancy, short of cutting the whole down again, will fill up the

base of a hedge that is lean and open at the bottom.* Hence the imperative necessity of cutting back the shoots till the base becomes a perfect thicket.

The hedge of the Buckthorn, or Osage Orange, that has been treated in this way, and has arrived at its sixth year, should be about six feet high, tapering to the top, and three feet wide at the base. This is high enough for all common purposes; but when shelter, or extra protection is needed, it may be allowed to grow eight or ten feet high, and four feet wide at the base.

In trimming the hedge, a pair of large shears called hedge shears, are commonly used. But we have found that English laborers in our service, will trim with double the rapidity, with the instrument they call a "hook." It may be had at our agricultural warehouses, and is precisely like a sickle, except that it has a sharp edge.

When the hedge has attained the size and shape, which is finally desired, it is not allowed to grow any larger. Two shearings or clippings are necessary, every season, to keep it in neat order—one in June, and the other at the end of September.

Counting the value of the plants in the commencement at five dollars per thousand, the entire cost of the hedge, at the end of the sixth year,—including planting, cultivating, and shearing in the best manner,—would here be about seventy-five cents a rod; which for an everlasting fence, and one of so much beauty, we think a very moderate sum.

We have said nothing about the temporary fencing which our hedge will need, till it is at least five years old—that is, if it is a boundary hedge, or is bordered on one or both sides by fields where animals run. It is evident enough that for this purpose, in most cases, the cheaper the fence the better.

* *Plashing* is a mode of interlacing the branches of hedges that are thin and badly grown, so as to obviate the defect as far as possible. It need never be resorted to with the Buckthorn, when a hedge is properly trimmed from the first.



Fig. 84. Mr. Lee's Hedge.

A very indifferent wooden fence will last five years, and a light barrier of posts and rails will best suit the taste of most farmers. A much more convenient, and very excellent one for the purpose, is the moveable *hurdle fence* made of light chestnut rails, which costs but little, and may be readi-

ly removed from one place or field to another, as the case requires.

No better *tail piece* can be given to this long article, than the above sketch, representing the remarkably fine specimen of the Buckthorn hedge in the grounds of JOHN C. LEE, Esq., of Salem, Mass.

HINTS ON THE CHARACTERISTICS OF FRUIT TREES.

BY F. K. PHOENIX, DELAVAN, WISCONSIN.

I wish to invite the attention of your readers to the importance of an acquaintance with the characteristics of fruit trees.

This branch of horticultural knowledge, I am well satisfied, has been very much neglected by most of our gardening writers, and still more so by many of our nurserymen, but of late I am happy to say it is attracting more attention. "The Fruits and Fruit Trees of America," contains much excellent information in regard to pears, plums and peaches in this respect, but in regard to apples, which are by far the most important of all, there is only enough to make one wish there was very much more.

The following remarks are intended to apply more or less to all the different kinds of fruit, but more particularly to the apple.

It is a well known fact that there are marked peculiarities in the different varieties of fruit trees, and it is indeed strange that there should not have been more attention paid to them, by our nurserymen and horticultural writers. Nature is quite as uniform and unchanging in regard to the tree as the fruit, and hence the necessity of describing and studying the characteristics of the one as well as of the other, in order to acquire ourselves or afford to others, the

most thorough acquaintance with varieties. When we take into consideration the way in which varieties of fruit are disseminated throughout our country, and the importance of the station occupied by nurseries and nurserymen in that work, the necessity of possessing and acquainting ourselves with correct descriptions of the *trees*, becomes still more apparent; that is, if we would avoid extending the multiplied mistakes which now occur. There are however some of our horticulturists, who, while they are compelled to admit that such peculiarities do exist, deny that they can be so described, as to have the descriptions understood and applied by persons unacquainted with the varieties themselves. Such I understand to be the position of Mr. J. J. THOMAS, in the May number of the *Cultivator*; but if this position be true, it can only be so of those who know little or nothing of the characteristics of fruit trees any way. Whether it is true in this sense, as applied to a majority of our nurserymen, I leave it for others more competent than myself to decide; but so far as I am acquainted with them, I do not hesitate to aver, that a majority of them seem ignorant of the characteristics of their most common varieties; and in my dealings with such, and acquaintance with their establishments, I have invariably found that they made many more mistakes than those who are in that respect of an opposite character. And this is necessarily so, from the very nature of the case, (taking it for granted, that such differences do exist,) and for two reasons.

First—If a nurseryman, after having worked several years among different varieties of fruit trees, failed to recognise and acquaint himself with some of their most prominent characteristics, it would bespeak a carelessness and negligence on his part, that might easily lead to the commission

of the grossest mistakes. Again, if there were a mistake made in a lot of scions or standard trees received, from which he propagated, or if a person in his employ should make a mistake, he could never discover and neutralize it, and hence it would be continued. There is but one way by which the force or application of this latter reason can be destroyed; and that is where a nurseryman never allowed any one to propagate in his nursery but himself, and that from bearing trees under correct names, and were himself *infallible throughout*. In such a case a near approach to perfect correctness might be made without the knowledge I speak of. But I have yet to find an establishment of the kind just mentioned, and if I did so, I could not expect to find one that was extensive, or that kept pace with the rapid improvement that is now making in the introduction of new and superior varieties. Indeed, in this way, it would be next to impossible to disseminate the fine new varieties, or at least very slow and costly, especially in sections remote from bearing orchards that were scientifically managed. The scions of many of the old varieties might be obtained from bearing orchards, and thus propagated with infallible certainty; but who would wish to be confined to them, when so many choice new sorts are being introduced; or on the other hand, what western nurseryman like myself could afford to go east every year or two, in order to get them from bearing trees? Hence the convenience and necessity of dealing with nurserymen who first obtain such kinds, and getting trees or scions from them; and when this method is pursued, it is impossible not to perceive the advantage of having correct descriptions of the characteristics of the varieties you get, and the knowledge requisite to apply them, in order to know whether they are probably genuine or not, or at least enough

of such knowledge to tell whether there has been any "mixing" in varieties. I have often, very often, felt the want of such descriptions, far more than descriptions of the fruits, because those I could not hope to see from my trees in several years, while I wished to commence propagating from them immediately; and although most of our standard horticultural works are lamentably deficient in regard to thus describing the different varieties of apple trees, yet I have been able, I firmly believe, to keep clear of many gross mistakes into which I must have inevitably fallen but for my acquaintance with the appearance of the trees. For instance I have sometimes ordered two trees of a kind, and on receiving them, found them to be unmistakeably different; again I have bought one year old root grafts of varieties with which I was well acquainted, and after growing them one year, have become perfectly well satisfied that there were two or three different kinds mixed together under one name; and several times among trees I purchased, have I found two or three grafts of other kinds amongst a lot of as many hundred of one variety; and still again I have bought scions and had them mixed in the same way, and have only saved myself from continuing the same wretched mistakes without end, by this knowledge of the peculiarities of trees. I would not wish any one to suppose from these remarks that I have dealt with nurserymen who had neither experience nor reputation to commend them—the exact reverse of this is true; but as I before remarked, those of whom I have the most complaint to make, think the least of the knowledge I speak of. I am free to say, that these conclusions of mine have never as yet been confirmed by fruiting any of the spurious trees, but by observation alone; and yet, as I said, I am well satisfied of their

correctness, quite as well for aught that I know as in concluding that an oak or a chestnut tree were different while young, and before they had fruited. From such experience as the above, it may well be supposed that I prize such knowledge not a little, and in fact I would not be without it, while dealing with so many different establishments, on any consideration. If I were, with my present knowledge of the many mistakes made in nurseries, I would be such a nurseryman as is above spoken of—never propagating a tree to sell as positively genuine unless worked by myself, and taken originally from bearing trees. This knowledge to be sure is not to be gained at once: it would not do for a tyro to take a work containing such descriptions, and proceed at once to approve or condemn a lot of trees from it; on the contrary, I would practice and recommend the greatest caution in forming or expressing an opinion in regard to them, however sure I might be that certain trees were *not* what they were called, and however confident I might be they were of another sort, I would never label such trees as of the variety I supposed it to be, although I should certainly refuse to label it as I thought falsely; such a lot of trees would be staked in my nursery as "mixed" or "uncertain," and would be sold accordingly. After a nurseryman once acquires such an acquaintance with the different characteristics of varieties, he could apply such descriptions almost to a certainty, *at least so as to very much strengthen or weaken the degree of confidence to be placed in a lot of trees*, and with a majority of varieties it would be next to impossible to deceive him by mixing them and calling them one; that is if he could have, say a whole season in which to form his opinion. It is of great benefit in forming such opinions, and of course would materially aid their approach to cor-

rectness if the suspected trees, or those which are to be compared, are of the same age, and stand closely together upon the same soil.

It may be objected that such descriptions in our horticultural works would be comparatively useless to the great majority of orchardists and fruit growers, because their opportunities for observation have been so limited in this respect, that they could not apply them with any degree of certainty, and hence it might only tend to confuse and embarrass. To this I would answer, that providing it benefitted *nurserymen* only, it would well repay the trouble of procuring and publishing such descriptions, as, if the nurseries wherever the young trees are obtained were correct, the bearing trees would of course be, other things being equal. But I deny that it would not benefit many orchardists as well as nurserymen. I have had several of your nice careful farmers notice and inquire the cause of the difference in the appearance of rows of apple trees in my nursery, which difference was caused *solely* by their containing different varieties. It might indeed occasion sometimes a pretty close inspection of nurseries, and *the trees which are sent out from them*, and in this respect might prove annoying to some of our nurserymen, if they knew that their wretched mistakes could be thus detected; but for one, I should be perfectly willing to have my nursery so inspected, and should rejoice that people were in possession of means by which they could tell whether my establishment was worthy of their confidence or not, without waiting years for their trees to fruit. It is a well known fact that there is no occupation where more dishonesty, whether wilful or unintentional, can be (I do not say, is) practiced with impunity *for a time* than in that of raising and selling fruit trees; and there-

fore it becomes all who would make the calling, and those who engage in it, honorable and worthy of confidence, to improve every means within their reach for the accomplishment of this desirable object. It is not to be sure a matter of life and death, nor one which is of such vital interest to the multitude. I would not by any means exaggerate the importance of the calling; but it is most certainly one which, if followed aright, keeps in the most constant exercise, some of our best faculties, and in which they may shine as clearly, though not as brilliantly, as in the most responsible station. If on the contrary it be followed incorrectly, it often occasions much disappointment and vexation, and sometimes serious pecuniary loss. Hence every proper restraint which can be used to prevent this, should be applied. Surely the dissemination of the knowledge I speak of could in no wise annoy a correct, upright nurseryman, because the more general and perfect the dissemination, the more obvious would be the excellencies of his establishment. In regard to those who were not correct or upright, all would of course be pleased if they were thus obliged to reform, or quit the field entirely.

Again it may be objected, that if nurserymen acquired such a knowledge of the trees, they would be less careful in propagating, thinking that if mistakes were made they could afterwards detect them. It seems to me, however, that the exact reverse of this would be true; at least I should have much more confidence in one who had been so careful and particular, as to acquaint himself thoroughly with his trees, and really had the ability to discover a mistake that might have been made. Besides if he had taken the pains necessary to acquire this ability, I should most certainly expect he would take the pains to use it. He would

of course be led to acquire such an acquaintance with his trees through fear of mistakes; and I should therefore expect that if he were so careful to keep clear of them in one department, he would be equally so throughout.

It may be that in this I am directed by "zeal without knowledge," and that my anxiety to have nurseries right, and these means adopted to aid in accomplishing that object, is overweening and useless; but it is not without much reflection and observation that I have formed these opinions, and concluded to write them out. If I can do no more than to call the attention of nurserymen to the importance of using this and every other means to have their establishments correct, and to the fact that there are some who can discover the mistakes they make before they are disseminated by the sale of the trees, or proved by fruiting them, I shall, I trust, do some good. But I am by no means alone in this way of thinking; all of the best works, both American and European, so far as I am acquainted with them, contain more or less in regard to the characteristics of the trees, in describing many varieties, especially the peach, plum, and pear.

If beneficial and proper in regard to these, why not the apple likewise, and to as great an extent? so that in relation to the existence of these peculiarities, and the propriety of *sometimes* describing them, all of the highest horticultural authorities agree. The only question therefore to be yet decided as to the truth of my position, when compared with theirs, is, do these peculiarities attach more or less to *all* varieties, so that a description of all, and an acquaintance with *all* in this respect, would be as practicable and useful as of a part? I think that they do; but some, as I before remarked, seem to question altogether the

importance of such descriptions, as for instance Mr. J. J. THOMAS, who in the May number of the *Cultivator*, while commenting on an article of Mr. H. W. BEECHER's in his tardy review of "The Fruits and Fruit Trees of America," writes as follows;

"An experienced person can often know a variety by the appearance of the young wood and growth of the tree, and nurserymen usually know at a glance, the different varieties they cultivate without seeing the labels," (it will be here noticed, that he differs very much from me in his opinion of nurserymen;) "hence great stress is laid on the importance of this distinctive trait in describing fruits. But a serious difficulty is not noticed. However well we may know varieties after we are familiar with their appearance by personal inspection, it is next to impossible to convey a knowledge of these appearances in words. We know a familiar acquaintance at the first glance of his face; and hardly a man exists but knows a thousand persons by looking in their faces, even though their names are not written on their cheeks; but the most minute description of the features would fail to convey a distinctive knowledge of the appearance of an individual. The light hair, the gray eyes, the bushy eyebrows, the hooked nose and sharp chin might apply to fifty individuals, while that peculiar, undefinable expression which cannot be described, is more characteristic than all. It is precisely so with the appearance of varieties in trees; when once familiar we know them well; but the points of distinction are too untangible to describe with precision. Hence this character though useful, is not of the greatest importance." This it seems to me is very queer doctrine for Mr. THOMAS to support; but let us see.

In the comparison he has made, he has taken as extreme ground as can be taken

on the opposite, and indeed much more so than a close application of the subject will warrant—because the number of the different individuals in the human family is practically infinite in this respect, whereas the different species or varieties of fruits of any one kind in cultivation, amount to *but* a few hundred. But for the sake of carrying out the comparison, let us suppose that two hundred white persons are selected promiscuously, and placed together; all are strangers to me, and their names, with an accurate description of each, are handed to me, by which to ascertain the persons to which they belonged. They may if you please, all be clothed in one style of fashion, only allowing the usual variety of colors; and the descriptions aside from this may be limited to the color or shape of the eyes, hair and skin, and to the general form of the person, whether long or short, slender or thick. I would like to know, how it would be possible for a man of common sense to make a single mistake, even under such unfavorable circumstances. If any suppose that they might be made, let him cypher out the number of changes that might be made with the sum of the characteristics above mentioned. But this is an extreme that never happens on the other side of the comparison, it would be nearer the truth of a *pretty bad* extreme, if one-half had their names written correctly on them, and the other half incorrectly, and he were *merely* required to tell which were right, and which wrong, and then stop. But let us see what there is in the characteristics of fruit trees, that will fairly affect those of the persons. Let the 200 persons represent as many varieties of apple trees, and the one style of clothing be the leaves, and the colors or shades of the persons and their clothes, be the different size, shades and forms of the leaves and scions; and

the general *form* of the persons, whether long or short, slender or thick, be the slow or rapid, small or large growth, and it seems to me that the comparison is a fair one. But the absolute untenableness of his position as indicated in his comparison is practically shown every day, the world over, by the numerous descriptions of runaway criminals and slaves, and the captures which are so generally made by following those descriptions. Again I do not know of any thing that man knows so well as he does the difference in persons, or as well as some nurserymen know the difference in varieties of fruit trees, when they see them, that cannot be expressed in language, so that a close, careful, and if necessary, a *lengthy* observation might not in a majority of cases determine the identity of the person or thing. Strange enough if what one man knows another may not, if his abilities and opportunities be equal; and quite as strange would it be in my opinion, if a man could not teach another what he knew himself *so well*; that is, if the other would but take the pains to apply the instruction received.

The characteristics I would mostly depend on in describing are the following: the growth, is it slow or fast, upright or crooked, coarse or slender? the prevailing color of the young wood; the leaves, large or small, serratures coarse or fine, sharp or round, their general shape. Is the tree hardy or tender on the root? Sometimes there are others which are very useful, as for instance, when the growth is regular, like the English Russet and Twenty Ounce; or the shoots stiff and rigid, as the Detroit Red, Blue Pearmain, Jersey Sweeting. The size of the buds, as large on the Swaar and Golden Sweet, and small on the Rhode Island Greening and Northern Spy. Where the characteristics were not tolerably dis-

tinged and well defined, they need not be mentioned, having it understood, that where nothing was said of the growth or leaves, &c., that there was nothing very marked or peculiar about them. As a specimen of what I should consider a full description in this respect, I will give the characteristics of a few well known varieties taken at random from my collection, which are worked on the root. But I do it with diffidence, as I have never before tried to make out any such descriptions in full, and therefore could do better doubtless if I had a little more experience in this department. *Holland Pippin* of the nurseries, *Fall Pippin* of the books, growth stout and rather crooked, young shoots very dark, leaves large, long and sharply serrated. *Yellow Bellflower*, shoots light colored, and very slender, leaves rather small, long and roundly serrated. *Roxbury Russet*, growth very crooked and rather slender in the nursery, shoots, buds, and under side of leaves more downy than common, color of shoots a dark, purplish red, tender on the root. *Baldwin*, a rapid upright grower, young wood dark red, leaves large and broad, bark apt to burst at the root the first year or two. *Rhode Island Greening*, a coarse thrifty but sprawling grower, shoots mostly shaded gray, otherwise a purplish red, leaves sharply serrated, tender on the root. *Detroit Red*, a moderate grower and very upright, shoots stiff and very dark, leaves thick and stiff, serratures shallow and not sharp, very hardy. *Blue Pearmain*, a slow, stiff grower, young wood very dark, terminal buds large, leaves broad, coarsely serrated, very hardy. *Golden Sweet*, a thrifty stocky grower, but very crooked and sprawling, young wood dark purplish red, buds very large, leaves roundish, serratures fine and sharp, very hardy. *Talman Sweet*, growth rapid, strong and rather upright, young wood dark, leaves

long, expanded and roundly serrated, hardy on the root.

F. K. PHOENIX.

Delavan, Wisconsin, Dec. 22, 1846.

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REMARKS.—We agree most heartily with Mr. PHOENIX, as to the importance of a greater attention, in pomological works, to the characteristics of fruit trees as exhibited in the growth, habit, and foliage of the different varieties. The subject is by no means new to us, and has occupied our attention more or less for a long time, but it is attended with difficulties much greater than would at first be supposed.

With Mr. THOMAS' opinion, above alluded to, we fully coincide. We have, ever since we can remember any individual object, been in daily familiarity with hundreds of varieties of trees and plants, and we are very confident that there are many shades of character in varieties, which are easily recognized by the practiced eye, but which it would puzzle the nicest critic to describe in words. Do not, indeed, the Rose and Dahlia catalogues of florists and plant growers, daily prove this? Even in England, where horticulture is most perfected, the same new variety of flower is not unfrequently described by various persons, advertising it for sale, as possessing shades of color quite dissimilar to each other.

There is another fact to be contended with, as regards general habit of growth in fruit trees. This is the effect of different soils in changing or modifying the character of varieties in this respect. A practiced grower of trees may be perfectly familiar with an hundred varieties of fruit in his own soil, so that he can at once distinguish them, simply at a glance at the foliage, color of the wood, and habit of growth; and yet if he is taken into a nursery of young trees, five hundred miles distant, growing on soil of an opposite character to his own,

he will, we assure him from experience, find himself very much puzzled.

The most skilful judge of varieties that we ever had the pleasure of knowing, was that excellent pomologist, the late Mr. ROBERT MANNING of Salem, Mass. He possessed the power of distinguishing, by a mere glance of his eye, over the foliage and growth, any given variety of pear tree, with a rapidity and certainty which seemed to amount almost to intuition. Yet when this gentleman first paid us a visit, some eight or ten years ago, on going into our grounds and attempting the exercise of this his usual power, he frankly confessed to us that such was the change produced by the difference of our soil and climate as compared with his own, that he could only recognize at once, in his usual manner, *the few most strongly marked varieties*. And we have ourselves found the same results on examining trees in the nurseries about Boston.

The only writer on fruits who has attempted to give a full description of all the points of growth, foliage and habit, in fruit trees, is DUHAMEL, whose work, in two large volumes, quarto, was published in Paris in 1768. We examined these points in DUHAMEL'S "*Arbres Fruitiers*," many times, very carefully and patiently, with the varieties described actually before us, and we frankly confess that we were forced to the conclusion, that the labored and minute descriptions there given of leaf, bud, wood and growth, conveyed so little distinct notion of character, that they rather served to confound than to aid the inquirer. We therefore abandoned the plan in our own work on fruits as unsatisfactory, and only gave such points in habit and growth as were strongly marked and unmistakeable.

At the same time we agree with Mr. PHOENIX in the belief that a great deal may

be done to convey, in a description, such an idea of certain points in growth, as will assist a grower of some experience in identifying many or most varieties merely by the leaf, wood, and growth. The examples he gives are good ones and to the point. But such descriptions must be made by a person of nice observation, great experience, and must be based not upon arbitrary notions of size and shape, but upon some standard laid down, and easily referred to. Thus, though the growth of a tree varies much in different soils, the *serratures* of its leaves always remain nearly the same—and the relative size of those leaves are always either large or small. Yet a pomological work, stating all these points, should not be content with stating that the leaves are coarsely or sharply serrated, broad or narrow, without laying down an exact standard of what a coarsely serrated, and a *broad* leaf, and their opposites are, so that in so nice a point as this, there shall be no room for doubt. Carefully prepared engravings of standard forms will do this perhaps—nothing else can.

Now that our *Fruits and Fruit Trees* has awakened so much zeal in the culture of fruit in all parts of the country, we are glad to notice the interest which even the nicer points in Pomology, that are but little attended to even in Europe, are awakening among us. The desire for accuracy, which great numbers of our cultivators now share with our correspondent, is the best guarantee that the subject will by and by receive all the attention it so fully deserves. In the mean time, we will assure him that it requires no little labor and patience to obtain the facts necessary to mark accurately even a single new characteristic point in all the varieties of a single fruit. We may perhaps best give a correct idea of this by say-

ing that before the publication of our Fruits, no American work contained descriptions of Peaches, Nectarines and Plums, in which the shape of the leaf glands, the smoothness or downy-ness were regularly given. Now these points appeared to us most essential in describing these fruits, which differ much less in their general appearance than do apples or pears. But it cost us two years of study and observation in different parts of the country, to arrive at the facts, on these points alone, which are presented in our work.

In a fruit running into such an endless va-

riety as the apple, it is very desirable that something like a few precise and definite points of character in foliage and growth, should be arrived at. But without the aid of an experimental garden, where all the varieties could be collected and grown for comparison, on the same soil, this would be a work of great labor and no little difficulty. Still we trust it will yet be done, and the more numerous growers of fruit become, who are actuated by the intelligent and progressive zeal of our correspondent, the more certainly and speedily will that desideratum be attained.—Ed.

REMARKS ON ROSES.—No. II.

BY DR. VALK, FLUSHING, L. I.

MR. RIVERS, who is unquestionably as yet the best author on the Rose, has very usefully furnished the following excellent lists as remarkable for *peculiar* properties:

If the amateur desires *six* of the most brilliant red Roses, we point out to him the following:—*Vesta*, an old variety; *Assemblage des Beautés*, *Eblouissante de Lequeur*, *Feu Brillante*, *Grand Capitaine*, and *Gloire de Rosamène*. Four of these are Gallicas, the other two Bourbons; and it may be worth noticing here, that *all* the more vivid scarlet Roses are only semi-double.

For *six* of the sweetest or most fragrant Roses, select *Prince Albert*, *Crimson Perpetual*; the common *Moss Rose*, always admired; the old *Cabbage Rose*, a favorite; the *Crested Provence*, and *Riego*, a sweet-briar. We have here four families—two Provence, one perpetual, one hybrid perpetual, a moss and briar. No one will question that fragrance is a decided property in a Rose, and will always stand first in the estimation of the public.

If *size* be desirable, combined with other qualities essential to the character of a first rate flower, then we select *La Reine*, a hybrid perpetual; *William Jesse*, the same; *Souvenir de la Malmaison*, a Bourbon; *Calypso*, classed with the Damasks, though "partaking much of the character of a hybrid China;" *Brennus* and *Chenédolé*, hybrid Chinas. These are fine noble flowers, and the family distinctions of little or no consequence, being very obscure except to those versed in the minutiae of drawing hair-split differences. It is certainly an act of condescension in Mr. RIVERS to point out these six largest Roses, as he has had to single them from his own "select list" of nearly 1,100 varieties.

Six of the most vigorous growing, and admirable for training, though used as standards, are, *Charles Duval*, *Chenédolé* (among the largest,) *Elise Mercœur*, *Great Western*, a superb Rose; *Hortensia*, and *Paul Perras*. Five are hybrid Bourbons, and one hybrid China. These grow rapidly,

and soon make very large heads, which, if properly trained, are splendid when in bloom.

Still following Mr. RIVERS, we come to *six* Roses of the finest forms, viz. *Boule d'Auteuil*, *Coupe d'Hebe*, *Kean*, *La Volupté*, *Rose Devigne*, and *Triomphe de JausSENS*.

The six "earliest *large* Roses," all taken from the hybrid Chinas, are *Blairii* No. 2, *Fulgens*, *George 4th*, *Magna rosea*, *Ne plus ultra*, and *Triomphe d'Angers*.

For six of the earliest *small* Roses, we take *Burgundy*, *Chinese*, *Sweet-briar*, *Persian Yellow*, the finest of all yellows; *Rose de Meaux*, *Moss Pomponne*, and *Sponge's* Rose.

The six *latest* Roses, are *Baron Prevost*, *Doctor Marx*, *Duchess of Sutherland*, *Lady Alice Peel*, *Madame Laffay*, and *Mrs. Elliott*, all hybrid perennials but one.

Now when it is considered that few persons, if any, have grown Roses so extensively as Mr. RIVERS, it is certainly an admission of no small value on his part, that these selections of forty-seven flowers, are the *most* distinguished for peculiar and desirable qualities. Making due allowance for difference of taste and opinion, they may be regarded as worthy of the amateur's best attention. To the growers of small collections, a better choice could scarcely be made; we therefore endorse Mr. RIVERS' recommendation as tested by our own experience.

The first step towards growing Roses, is unquestionably to procure them. But there is some difficulty even in this procedure, for *all* who cultivate them for sale, are by no means so careful or so honest as they profess to be. In private gardens, none but the *best* should be tolerated; these we have enumerated in our first article, and refer to it for the specific lists; yet we are bound to say, that as *first rate* flowers are rather scarce,

some of those mentioned may be deficient in the essential properties which go to make up a *perfect* Rose. If the amateur wishes to know what these essential properties are, we take pleasure in giving him the information, from a first-rate authority,* and add our full conviction of their great value to the science of horticulture.

There is no flower more difficult to define than the Rose, and the difficulty arises out of several curious facts. First, the Rose is the only flower that is beautiful in all its stages—from the instant the calyx bursts, and shows a bit of the tinted corolla, till it is in full bloom. Secondly, it is the only flower that is rich in its confusion, or, that is not the less elegant for the total absence of all order and uniformity. The very fact of its being beautiful from the moment the calyx opens, makes the single and semi-double kinds, up to a certain stage, as good as the perfectly double ones, and there is yet another point in the construction of some varieties, which make them lose *their* beauty when they become full blown. For instance, the Moss Rose is a splendid object so long as the calyx is all seen, but so soon as the flower fully opens, all distinction between it and a common one is concealed. From this one fact, we insist that Roses when exhibited, must be divided in distinct classes, for the purpose of displaying their most distinguished properties to the best advantage. The grand feature of a Moss Rose then, is its calyx, and this can never be fairly estimated by full blown flowers; therefore, *all* varieties of Moss must be shown *before* the flower has expanded. In the present state of Horticulture, we can hardly admit that any other than *perfectly double* Roses should be grown. A *new color* should alone justify the saving of any Rose if it were only semi-double or single. Now,

* GLENNY'S *Properties of Flowers*.

if there be any distinct and valuable feature in a plant, which justifies the growing of it *as a plant*, then is the bloom entirely out of the question, and such plant is scarcely worth the florist's keeping. Some properties apply to *all* Roses, and may therefore be taken as estimable points in the construction of a flower.

"First—The petals should be thick, broad, and smooth at the edges."

Whether this be for a Moss or any other Rose, this property is particularly valuable, because the thicker the petal, the longer it is opening, and the longer does the flower continue in perfection. The thicker the petal the more dense and decided will be the shade or color, or the more pure a white, while the most brilliant scarlet would look tame and watery, if the petal were thin, transparent, and flimsy.

"Second—The flower should be highly perfumed, or in other words, it should be very fragrant."

Placed upon the throne of the garden as the queen of flowers, it is this property which gives the Rose so great a charm; and whether it be to climb the front of a house, bloom on the ground, or mount poles, or other devices, fragrance will ever be deemed a most essential quality.

"Third—The flower should be double to the centre, high on the crown, *round* in the outline, and regular in the dispositions of the petals."

This doubleness is quite as requisite in a Moss Rose as in any other, because where it exists, the *bud* will be more full and beautiful. In conformity to the properties mentioned, a fine double Rose should appear as in Fig. 85.

We say "*should appear*," for as yet the best Rose we ever saw, is far from being equal to the above diagram, though several



Fig. 85. A Perfect Rose.

have made considerable approaches to it. It will yet be reached.

"Fourth—The color should be distinct, and stand fast against the sun and air, till the bloom fails."

"Fifth—The stem should be strong, the footstalk stiff and elastic; the blooms well out beyond the foliage, and not in each other's way."

It is a very bad habit in a Rose, to throw up several flowers close together, on short stiff footstalks, for some of them must be cut away before the others can be fully developed. The side buds prevent the centre flowers from opening properly, and when the first beauty is passed, they exhibit dead Roses held fast between living ones. Such plants are very untidy.

In addition to the preceding general properties applicable to all classes of Roses, there are others which only apply to separate families, such as the Noisettes, Climbers, &c., which we shall notice more particularly at some other time, and now proceed to the points of cultivating Roses, most requisite to success. The first consideration, is the

PROPER SOIL.

A strong rich loam is the proper soil for the Rose, to which it is as well to add well decomposed leaf mould, or well rotted stable manure. In a soil thus prepared, the plants will grow vigorously and bloom finely, but we are not always able to command such, and very often must make the best of what we have. In a poor soil, the Rose will not give any satisfaction, and not unfrequently shows only semi-double or single flowers; indeed many good Roses have been condemned, solely because grown in a soil altogether unsuited to them. The importance then of having a *very rich soil* cannot be too strongly enforced upon the minds of all who wish to be successful in cultivating these splendid flowers, in fact it would be difficult to make the ground too rich. If, therefore, the amateur has not the soil required, he must change the nature of what he has, by means of loam, or manure, or both. If he does not attend particularly to this direction, he cannot expect to be successful in obtaining either vigorous growth, or fine blooms.

PLANTING.

Next to the soil in importance, is the planting. If received in pots, turn out the plants, remove the crocks from the bottom of the ball, loosen the soil a little by moderate pressure, and place in the hole no deeper than even with the general surface; fill in with the soil removed, and tread it down firmly. If your plants are received

with loose roots, examine these, and cut away, with a sharp knife, *every bruised portion*, leaving all the ends smooth and clean. If any root is growing directly downward, cut it off; the plant is better without it. This preparation made, and the holes dug large enough to take in the root without cramping it, loosen the soil in the bottom of the hole. Should the plant be too large to manage alone, let an assistant hold it for you, then throw in the soil between the roots, move the stem from side to side, and pull upwards a little; by this means all the roots will be well covered, and no vacant spaces left between them. If rightly done, the top of the root must be near the top of the ground; none of the stem must be buried, and when trodden down, the plant must be steady and firm. If you have to manage the planting alone, lay hold of the stem just above the root, and fill in the soil with the other hand, proceeding in other respects as above directed. With standard or tree Roses, you should drive stakes firmly into the ground, and fasten the stems to them, thus guarding against the effects of the wind, and securing the roots from disturbance or breaking. A very handsome group of standards might be thus formed: six feet plants in the middle, four feet six inches in the next row, three feet ones next the front, and eighteen inch plants outside; these, if at proper distances, and of picked sorts assimilating in habit of growth, will form a splendid bank of Roses in the proper season. In planting a clump of Roses, remember they should all flower *about the same time or season*, if not, they never can or will look well. The planting of Roses on their own roots, whether for dwarfs or climbers, differs in no wise from any other planting, except as to situation, requiring more protection from the wind. Whatever they have to support

them, should be fixed firmly in the ground *before the Rose is planted*; if afterwards, the roots will be damaged more or less, and the plant's growth checked, perhaps for a whole year. Begin right, and you save both time and trouble.

PRUNING ROSES.

This is an important operation, and the objects to be attained by it should be well understood. These are, to compensate for the loss of the root that has to nourish the head, by reducing it more or less; to give a proper shape to the plant, according as you grow it as a bush or as a standard; or, in some particular fancy form. How this is to be done, will depend at first upon the state of the plant when you have planted it. If it be very full and bushy, cut away all the weaker branches, leaving four or five of the strongest shoots, and shorten these to three or four buds. If you wish the plant to continue dwarf and bushy, cut down to the last two eyes of the new wood, and leave no half grown shoots on. It may be that there are more branches than you require any way; cut away one-half of them, (the weakest,) and thin out the others so that they stand not in each other's way; for Rose trees and bushes, like every thing else, are easily spoiled by bearing too much wood. The climbing Rose is frequently required to make as much show as possible the first season after planting, but unless they are removed with *great care of the roots*, they should be cut almost to the ground, and the branches thinned out also. None but the best and strongest wood ought to be allowed to remain, and if this be not first-rate, it will be better to cut back to two eyes of the best, and remove the weaker altogether.

For standard Roses the course pursued is somewhat modified. A standard Rose tree, to be really handsome, should be as wide in

the head as its entire height; and although upon the present system of pruning them, they enlarge a little every year, still they are not kept in a proper shape, and consequently the pruning is wrong. For all Roses, spring pruning is the best in *this* climate; therefore when your standards are planted, touch them not until April; then cut all small shoots close off, and shorten the strong ones to three or four eyes, taking care to leave the uppermost eyes *pointing outwards*; these will afford you a *wide* head, just what is wanted. As the new shoots grow, observe the best and strongest that are growing in the right direction to widen the head, and let them make all the growth they will; allow any shoot that is growing up strong in the centre to do the same; and further, a most important point, rub off, or cut off with a very sharp knife, all weak shoots, all that point *inwards*, and when two shoots cross each other, cut away the weakest. The branches that grow outwards will be good enough, and strong enough in one season's growth, to leave any length you please towards making a proper sized head; but as five or six of these branches will not make a *full* head, the next season shorten them half their length, taking care that the *end* bud be an *under* one, for all the tendency of the Rose is to grow upwards, and it is only when the natural growth is outwards or downwards, that the weight prevails to keep it in a horizontal or drooping position. In the second year, and each subsequent season, every branch that does not assist to form a handsome head without crowding, must be cut clean out, and the younger it is the better, because the remaining branches grow faster. If there be one, two or three upright shoots, (one *strong* one is worth three weak ones,) you may shorten these to two or three good eyes fairly *above* the

other branches, so that when they grow outwards the next year, they may help to fill up the head of the tree in the centre. Rub off all buds that come where you do not want them, and leave those of which you are doubtful, because it is at this period you have the power of driving the whole strength of the plant into the branches that you save. In this way proceed until the head of the tree is of proper form and proportion, instead of, as we now see them every where, a small, pimping, ungraceful head, to a tall and graceless stem. When once your plants have arrived at this perfection, which *with care* they soon will, you may cut back every season's growth to *two* buds or eyes; cut away entirely every weak shoot, remove those that are in the way of others, and when any portion is confused by reason of too many spurs or branches, clear

some of them away. Never be afraid of cutting any branch clean out, if it comes in the wrong place, or interferes with your design in forming a compact, symmetrical head. Bear in mind, that if you wish a great many flowers, and grow your standards for appearance, they must not be too closely pruned; but if you desire to show your blooms at exhibitions, and want *large* flowers, use the knife more freely; a multiplicity of blooms is against size. The necessity of *spring* pruning is earnestly recommended; it is, in fact, nipping mischief in the bud, for you can watch the development of the newly coming branches, and remove all but the number there is good room for.

The subject will be continued in the No. for March. WM. W. VALK, M. D.

January 4, 1847.

HORTICULTURE OF THE OLDEN TIME.

BY JOSEPH BRECK, BOSTON.

It is sometimes pleasant to have things *old* as well as *new*, brought before the mind, to take a retrospective glance, the better to judge of the progress that has been made in pursuits, in which so many now delight to engage; arts, which aided by the light of science of the nineteenth century, are now so rapidly tending toward perfection. We have been much interested and amused in conning over an old work that has been kindly loaned us by the librarian of Harvard college. We found it, in examining this immense collection of books in one of the alcoves devoted to botanical, agricultural, and horticultural works; an ancient and rare folio volume of about 1,700 pages, entitled "The Herball or General Historie

of plantes, gathered by "John Gerarde of London, master in Chirurgerie, very much enlarged and amended by Thomas Johnson, citizen and apothecarye of London, Anno 1633."

The work appears to have been first published by Gerarde in 1597, so that with the exception of that portion of the work "enlarged and amended by Thomas Johnson," the descriptions of the trees and plants were given 250 years since.

It is written in a pleasing quaint style: every plant is so well described and illustrated with a well executed wood cut, that although the scientific and common name in many cases differ from those of the present time, it is at once recognized.

The volume is divided into three books.

1st. "Treats of Grasses, Rushes, Corne, Reeds, Flags, Bulbous or Onion rooted Plants."

2d. "Most sorts of Herbs used for meat, medicine or sweet smelling."

3d. "Hath Trees, Shrubs, Bushes, Fruit-Bearing Plants, Roses, Rosins, Gums, Heaths, Mosses, Mushrooms, Corall and their several kinds." The Latin and English name is given to each plant, which is placed over the picture of the plant; then follows the kinds, description, place, time, names, natures and virtues.

A few extracts from some of the chapters on fruit may not be without interest to the readers of the Horticulturist; the spelling of the words however, I think it expedient to modernize in some degree.

"Of the Pear tree—The description—To write of Pears and Apples, would require a particular volume; the stock or kindred of Pears are not to be numbered; every country hath its peculiar fruit; myself knows one curious in grafting and planting of fruits, who hath in one place of ground, at the point of three score sundry sorts of Pears, and those exceeding good, not doubting but if his mind had been to seek after multitudes, he might have gotten together the like number of those of worse kinds; besides the diversities of those that be wild, experience sheweth sundry sorts; and therefore I think it not amiss to set down the figures of some few, with their several titles, as well in Latin as English, and one general description for that, that might be said of many, which to describe apart, were to send an Owl to Athens, or to number those things that are without number:"

The following are the named varieties.

1. *Pyrus Superba*, The Catherine Pear.
2. *Pyrus Præcocia*, The Jenning Pear.
3. *Pyrus Jacobæa*, St. James Pear.
4. *Pyrus Regale*, The Pear Royal.
5. *Pyrus Palatinum*, Burgamot Pear.
6. *Pyrus Cydonium*, The Quince Pear.

7. *Pyrus Episcopatum*, The Bishops Pear.
8. *Pyrus Hymeale*, The Winter Pear.

"The general description.—The Pear tree is for the most part higher than the Apple tree, having boughs not spread abroad, but growing up in height; the body is many times great; the timber or wood itself is very tractable or easy to be wrought upon, exceeding fit to make moulds or prints to be graven on, of color tending to yellowness; the leaf is somewhat broad, finely nicked in the edges, green above, and somewhat whiter underneath; the flowers are white; the Pears, that is to say, the fruit, are for the most part long, and in form like a top; but in greatness, color, form and taste, very much differing among themselves; they be also covered with skins or coats of sundry colors; the pulp or meat differeth, as well in color as in taste; there is contained in them kernels, black when they be ripe; the root runneth strait down with some branches running aslope."

"The Place.—The tame Pear trees are planted in orchards, as be the Apple trees, and by grafting, though upon wild stock, come much variety of good and pleasant fruits. All these before specified, and many sorts more, and those most rare and good, are growing in the ground of Master RICHARD POINTER, a most cunning and curious grafter and planter of all manner of rare fruits; dwelling in a small village near London called Twicknam; and also in the ground of an excellent grafter and most painful planter, Mr. HENRY BANBURY, of Touthill-st., near Westminster, and likewise in the ground of a diligent and affectionate lover of plants, Mr. WARNER near Horsey, down by London, and in divers other grounds about London. Most of the best Pears are at this time to be had with Mr. JOHN MILLEN in Old-st., in whose nursery are to be found the choicest fruits this kingdom yields."

Among other virtues and qualities ascribed to the pear, the author says, "Wine made of the juice of Pears, being taken in small quantities comforteth and warmeth the stomach, and causeth good digestion."

The Apple. After some general descrip-

tion of the Apple tree, and speaking of the innumerable tastes and flavors of the different varieties, and the impossibility on his part to distinguish them, he says, "notwithstanding, I hear of one that intendeth to write a peculiar volume of Apples and the use of them, yet when he hath done what he can do, he hath done nothing touching their several kinds to distinguish them."

The following varieties are named as superior:

1. *Malus carbonia*,
The Pome Water Tree.
2. *Malus carbonia a longo fructu*,
The Bakers Ditch Apple Tree.
3. *Malus reginate*,
The Queening or Queen of Apples.
4. *Platomela sive Pyra æstiva*,
The Summer Pearmain.
5. *Platurchapin sive Pyra hyemalia*,
The Winter Pearmain.

"The Place.—The tame and grafted Apple trees are planted and set in orchards made for that purpose; they delight to grow in good and fertile ground; Kent doth abound with Apples of most sorts; but I have seen in pastures and hedgerows about the grounds of a worshipful gentleman, dwelling two miles from Hereford, called Master Roger Bodnome, so many trees of all sorts, that the servants drink for the most part no other drink but that which is made of Apples. The quantity is such, that by the report of the gentleman himself, the Parson hath for tythe many hogsheads of cyder. The hogs are fed with the fallings of them, which are so many, that they make choice of those apples they do eat, who will not taste of any but the best. An example doubtless to be followed of gentlemen who have land and living; but enough saith, the poor will break down our hedges, and we shall have the least part of the fruit; but forward in God's name; graft, set, plant and nourish up trees in every corner of your grounds. The labor is small, the cost nothing; the commodity is great, yourselves shall have plenty, the poor shall have somewhat in time of want to relieve their necessity, and God shall reward your good minds and diligence."

Under the paragraph 'The virtues of the Apple,' among the many good qualities, the author says—"The pulp of the roasted Apple, in number four or five, according to the greatness of the Apple, especially of the Pome Water, mixed in a wine quart of fair water labored together until it becomes to be as Apples and ale, which we call Lambs Wool, and the whole quart drank last at night, within the space of one hour, doth in one night cure the strangurie, and other like diseases; in twice taking it, it never faileth in any; which myself have often proved, and gained thereby both crowns and credit."

Of Plums—"To write of Plums particularly would require a peculiar volume, and yet not the end to be attained unto, nor the stock or kindred perfectly known, neither to be distinguished apart; the number of sorts or kinds are not known to any one country; every climate hath his own fruit far different from that of other countries; myself have three score sorts in my garden, and all strange and rare; there be in other places many more common, and yet yearly commendeth to our hands others not before known."

Of Cherries, the writer makes mention of "divers sorts, some bringing forth great fruit, others lesser; some with white fruit, some with black, others of the color of black blood, varying infinitely according to the climate and country where they grow."

The double flowering Cherry was then known and thus described: "The double flowering Cherry tree groweth up like unto an hedge bush, but not so great nor high as any of the others; the leaves and branches differ not from the rest of the Cherry trees. The flowers thereof are exceeding double, as are the flowers of Marigolds, but of a white color, and smelling somewhat like the hawthorne flowers; after which come seldom or never any fruit, although some authors have said that it beareth sometime fruit, which myself have not at any time seen: notwithstanding the tree hath grown in my garden many years, and that in an excellent good place by a brick wall, where it had the reflection of the south sun, fit for

a tree that is not willing to bear fruit in our cold climate."

Full descriptions are also given of the Peach, Apricot and other fruits, Gooseberries, Currants, &c., with their different varieties. So that whatever may be our own opinions in relation to the great improvement, made in these modern days in horticulture, we may not after all, be much in advance of those who lived more than two centuries before us.

We find the Potato spoken of under the Latin name of *Battata Virginiana sive Virginianorum*, Virginian Potatoes, to distinguish them from the sweet Potato (*Battata Hispanorum* of that time.)

"From the leaves come forth long round slender foot stalks, whereon do grow very fair and pleasant flowers, made of one entire leaf, which is folded or plaited in such strange sort, that it seemeth to be a flower made of fine sundry small leaves, which cannot easily be perceived except the same be pulled open. The whole flower is of a light purple color, striped down the middle of every fold or welt, with a light show of yellowness, as if purple and yellow were mixed together. In the middle of the flower thrusteth forth a thick flat point, all yellow as gold, with a sharp green prick or point in the middle thereof. The fruit succeedeth the flowers, round as a ball, of the bigness of a little bullesse or wild plum, green at the first, and black when it is ripe; wherein is contained small white seed lesser than those of the mustard. The root is thick, fat and tuberous, not much differing either in shape, color or taste from the common Potato, saving that the roots hereof are not so great nor long; some of them are round as a ball, some oval or egg fashion, some longer, and others shorter; the which knobby roots are fastened unto the stalks with an infinite number of thready strings."

"The Place—It groweth naturally in America, where it was first discovered, as reports C. CLUSIUS, since which time I have received roots hereof from Virginia, otherwise called Novembega, which grow and

prosper in my garden as in their own native country."

The Tomato is figured under the name of *Poma amoris* or Apple of Love, and reported to be eat in Spain when prepared and boiled with pepper, salt and oil. "But they yield very little nourishment to the body, and the same naught and corrupt."

"Likewise they do eat the Apples with oil, vinegar and pepper mixed together for sauce to their meat, even as we in these cold countries do mustard."

Gerarde, after describing the red and white Beet, says "there is likewise another sort hereof, that was brought unto me from beyond the seas, by that courteous merchant Master LETE before remembered, the which hath leaves very great, and red of color, as is all the rest of the plant, as well root, as stalk and flowers, full of a perfect purple juice tending to redness; the middle rib of which leaves are for the most part very broad and thick, like the middle part of the cabbage leaf, which is equal in goodness with the leaves of cabbage when boiled. It grew with me (in 1596) to the height of $7\frac{1}{2}$ cubits, and did bring forth his roughly and uneven seed very plentifully; with which plant nature doth seem to play and sport herself; for the seeds taken from that plant which was altogether of one color, and sown, doth bring forth plants of many and variable colors, as the worshipful gentleman Master JOHN NORDEN can very well testify, unto whom I gave some of the seeds aforesaid, which in his garden brought forth many other beautiful colors."

A few extracts from the chapter on Roses will close this article.

"The plant of Roses, though it be a shrub full of prickles, yet it had been more fit and convenient to have placed it with the most glorious flowers of the world, than to insert the same here among base and thorny shrubs; for the Rose doth deserve the chiefest and most principled place among all flowers whatsoever, being not only esteemed for its beauty, vertues, and his fragrant odoriferous smell; but also because it is the honour and ornament of our English

sceptre, as by the conjunction appeareth in the uniting of those too most royal houses of Lancaster and York."

"It is reported that the Turks can by no means endure to see the leaves of Roses fall to the ground, because that some of them have dreamed, that the first or most ancient Rose did spring from the blood of Venus, and others of the Mahometans say, that it sprang from the sweat of Mahomet."

The double Roses described, are the white, red, damask, Rose without prickles, and the Holland or Provence. "The Holland or Provence Rose hath divers shoots proceeding from a woody root, full of sharp prickles, dividing itself into divers branches, whereon do grow leaves, consisting five leaves set upon a rough middle rib, and those snipt about the edges; the flowers do

grow on the tops of the branches, in shape and color like the damask Rose, but greater and more double, insomuch that the yellow chives in the middle are hard to be seen; of a reasonable good smell, but not full so sweet as the common damask Rose; the fruit is like the other of his kinde."

Under the head of musk Roses, are the double and single and great musk, the velvet, single and double yellow, single and double cinnamon. Under wild Roses; single and double eglantine, briar and pimpinell Roses. The cut of the Holland Roses is a good representation of our La Reine, equal in size and perfection to one of the best specimens. Thus ends my chapter on ancient Horticulture. J. B.

THE BEGONIA—ITS VARIETIES AND CULTURE.

FROM THE LONDON HORTICULTURAL MAGAZINE.

THE Begonia is rather an extensive genus, composed principally of stove-plants. It is named after Michael Begon, a Frenchman, and promoter of botany, and belongs to the natural order Begoniaceæ, and to the Linnæan Monœcia Polyandria. It consists chiefly of succulent-stemmed plants, which are remarkable for the obliquity of the leaves at their base; and in the greater number of species, the flowers are very handsome. As a family, the culture of the Begonia has been a good deal neglected; and yet, for those who have any taste for an assemblage of affined plants, the Begonia offers inducements which are by no means common. It is, doubtless, the fact of their being stove-plants, that has, at least partly, operated to produce the neglect into which they have fallen; yet they are by no means chargeable with the expense which is usually understood to attach to the culture of stove-plants. A small structure, with a temperature very slightly elevated above that of a greenhouse, would be sufficient to grow most, if not all, the species to pretty good perfection, as their growth would be chiefly effected in the summer season, when advantage could

be taken of the heat of the sun; and in the winter, when the chief portion of expense would be incurred, they would be benefited, rather than injured, by a low degree of temperature, as compared with what is usually considered necessary for stove-plants.

The affinities of the order are, by the analogy of properties, chiefly with Polygonaceæ. Some of the species known to botanists, such as *B. grandiflora*, and *B. tomentosa*, possess bitter, astringent roots, like those of the Bistort, (*Polygonum bistorta*.) Others, as *B. odorata*, have fragrant blossoms, in which they agree with *Polygonum odoratum*. The leaves of *B. nitida*, or *obliqua*, are used as sorrel, and are known in Jamaica as the Sorrel of the Woods; whilst in Brazil, the leaves of *B. ulmifolia*, *B. bidentata*, *B. spatulata*, *B. cucullata*, and *B. hirtella*, are used as cooling salads. Several species yield in Brazil a cooling drink, similar to that prepared in the East from *Rheum ribes*; and oxalate of potass is obtained from several species, as well as from many kinds of Rumex. The root of *B. obliqua* is called Wild Rhu-

barb. In all these instances, it will be observed that the analogy of properties between the two orders is very considerable.

It has already been remarked, that the Begonias are, for the most part, stove-plants; but it is probable that when they come more generally and extensively into cultivation, several of the species will be found to grow with a very little increase of artificial heat above that afforded by a good green-house.



Fig. 85. *Begonia ramentacea*.

The common species *B. discolor*, or *Evansiana*, may be cultivated to considerable perfection in sitting-rooms, for which its tuberous roots and annual stems peculiarly adapt it. *B. octopetala*, and *diversifolia*, and some others, possess a similar habit. This feature, taken in connexion with the geographical range in which any species may be found, will afford a pretty good index to those which may be expected to succeed with a less amount than usual of artificial heat.*

With the exception of *B. discolor* and the Cape and Mexican species, the whole must, however, be regarded as stove-plants, which, though admitting of cultivation, in many cases, in a low stove temperature, can only be regarded as attaining their greatest de-

gree of development and perfection when afforded the ordinary treatment of stove-plants.

The Begonias may be divided into sub-shrubby, herbaceous, and tuberous rooted stove-species, and green-house species, each of which classes will be noticed separately.

The sub-shrubby species, or those with permanent fleshy stems, may be propagated by cuttings of the stems, or by seeds, which latter, in some cases, are produced freely. Being of a fleshy nature, the cuttings will root readily, in almost any situation where there is heat enough for them. A moist heat of 65° will cause them to root speedily; or if this is not at hand, they will root with equal surety, though less quickly, if set in a shady part of a hot-house, or even in the window of a sitting-room; in the latter cases, the cuttings must be covered with a bell-glass, and attentively watered; but when placed in moist heat—as, for instance, in a hot-bed frame—they must not be covered in this way, as it would probably cause them to damp off. Any sandy soil will be suitable for rooting the cuttings in, the usual and necessary attention being paid with regard to drainage.

When the cuttings are rooted, the repotting of them must be duly attended to, in order to produce good specimens. The Begonias are plants which will exist, grow, and even flower, with very little attention, and when allowed to remain in small pots; but it is not in this way that the beauties they are capable of developing will be fully brought out. They require liberal treatment, as far as regards the elements of their growth; that is to say, they ought to be allowed plenty of pot-room, and copious supplies of water; and they are, when under careful treatment, all the better for getting a good portion of pot-room at one period—not a constant, every-now-and-then removal to a pot scarcely larger than the former, but a remove that will afford the roots some space to play, and extract food sufficient to produce a perfect plant. So large a portion of soil, however, and copious supplies of water, involve other considerations; the pots *must* be perfectly drained, and the soil should have intermixed with it a considerable portion of

* The common Begonia, (*B. discolor*.) as well as several others of the hardier sorts, do exceedingly well in this climate if planted out in a rich deep border, where they flower most abundantly all summer.—ED.

lumps of porous material, such as charcoal, free-stone, or broken bricks; the plants too must be set where they will command the influence of abundance of light, every ray that can be afforded them—during the earlier stages of their progress; otherwise, the abundance of food taken up by the roots will not be properly elaborated, and its purpose will be defeated. Such potting as this must not be done, except in the spring and



FIG. 87. *Begonia parvifolia*.

early summer, for the summer-flowering species, and early in the autumn for those that produce their bloom in winter and spring: it is the means to be resorted to, to produce the growth that is to afford abundance of flower; and, consequently, as the summer-blooming ones will not have commenced growth, and the winter-bloomers will be just arriving near maturity, neither class will properly require such potting in the depth of winter. In the case of plants that may be duplicates, and whose season of growth may have been altered for the purpose of securing a succession of bloom, repotting must of course be done at a period suitable for inducing bloom at the time required. If, with this in view, it becomes necessary to pot in the winter, of course a smaller pot will suffice than might be em-

ployed at a season more favorable to growth.

In regard to soil, the Begonias delight in that in which vegetable soil abounds, although, when vigor and maturity of growth are desired, something more substantial must be added. Nothing can suit the majority of them better than a mixture of the turfy part of sandy loam and well-reduced leaf-mould, in about equal proportions, or with a slight preponderance of loam, sufficient drift, or river-sand, being added to cause the whole to be perfectly permeable to moisture. With a mixture such as this, and a good portion of drainage, in the shape of broken potsherds, or small lumps of charcoal, in the bottom of the pots, and some larger pieces used intermixed among the soil, all that need be attempted will have been done, so far as the soil is concerned.

The herbaceous species, including also under this head those with short stems an inch or two long, having leaves at their extremity, may be multiplied by division of the plant, and by seeds. Sometimes these short branches will issue from the lower part of the parent plant, and spring up through the soil, and become furnished with roots; in which case, the divided portions will be plants at once, and in a very little time will have become well-established, if ordinary care is afforded them after their removal. Sometimes however, such portions may be detached without having roots already formed; and in this case they must be treated as cuttings. When they have a portion of roots when first detached, they should be carefully potted in small pots—as small as may suit their size, and should then be removed to a warm and moderately close situation, until they are perceived to have commenced growing, when, of course, they may be regarded as being established. The same remarks, as regards soil and potting, apply to them, as to the sub-shrubby ones, excepting that, in some cases, the herbaceous ones, from the size of their leaves, and the general vigor of their growth, will require pots a trifle larger than the others.

The tuberous rooted species require precisely the treatment of tuberous and bul-

bous-rooted plants. Their leaves and stems die away in the autumn, after the flowering season is past, and the roots go into a state of inactivity and rest, until the return of the proper season when they are again to be brought into life and action. After the flowering season has passed and the plants have attained their full maturity, water must be gradually withheld, until the leaves and stems have gradually and entirely decayed, and separated from the tuberous roots. The roots are then to be placed away for the winter, in any dry warm place; a convenient way is to turn the pots on their sides on some dry shelf in the hot-house, or beneath some of the benches where the water does not drain through: it is desirable that the tubers should be preserved in the pots without being at all disturbed. By the end of February or the beginning of March, they may be taken out, and removed from amongst the old soil, and carefully repotted into pots corresponding to their size; the soil should be rather dry, and but moderately watered until they have manifested signs of growth. The same kind of soil may be used for these as for the others. When necessary the plants must be repotted, giving them a good shift when they have got into a fair growing state. Through the whole of this period they are to be placed in any convenient part of the stove, where they will be near the light, as for instance, on a shelf near the glass, or close to the front sashes. In the general features of their treatment, the plants will in other respects require the same attention as the others.

They do not require the excessive heat of a stove, and therefore, if any portion of the house is somewhat cooler than another, the cooler part is that which will be most suitable for the Begonias. It will be an advantage to place them altogether in a group, not only for the sake of securing the characteristic appearance which this arrangement favors, but also that they may all be alike situated with regard to their treatment. They do not well associate with a miscellaneous collection of plants in their appearance, and the variety of habit, foliage, and color of the flowers among them, is sufficient to prevent anything like mono-

tony when kept in a group by themselves: and as regards treatment, especially with respect to moisture, this arrangement is much to be preferred; for in the growing season, when they require a liberal supply, it can be afforded, and they can be readily sprinkled with the syringe two or three times a day, which is very beneficial; and in the winter season, or when they are at rest, the syringing may be discontinued, and the soil



Fig. 88. *Begonia coccinea*.

more easily prevented from getting more moisture than would be desirable. These remarks apply chiefly to the plants during the periods of active growth and rest; for when in flower, it is of course quite proper to remove them to any particular position where the beautiful effect of their blossoms may be required, and if several may happen to be at one time in bloom, it may be preferred to distribute them throughout the structure, rather than to locate them in one particular spot.

Having said thus much with respect to

the situation most proper for them, it will hardly be necessary to say, that a mean artificial heat of sixty degrees is sufficient for them; of course, if they are kept in a stove, they will during spring and summer be submitted to a much higher degree of heat than this, derived directly from the rays of the sun.

Another advantage to be derived from the practice of grouping them together in one part of the house, consists in the facility afforded for shading the plants, or otherwise. During the winter portion of the year, the whole of the species, except the tuberous-rooted ones, which will be stored by till the spring, are benefited by having as much light and sun as they can have at that season of the year, which, of course, is not much, and of which they would partially be deprived if associated among other plants, such as the majority of stove-plants, usually are. In the summer, on the other hand, they are benefitted by shade afforded in a moderate degree; and as shading is not required by the majority of a mixed collection, the arrangement of these in a separate group affords the readiest means of giving them the particular degree of shading which they require.

The treatment of the more hardy kinds, which may be grown in a warm greenhouse, is similar in all the leading points to that already noticed for the others. Of course, being in a lower temperature, they will not either bear or require so much moisture as they would do under other circumstances. Especially during the winter season, when the plants will be in an inactive state, must this supply be limited, or the plants will be liable to rot off.

The greenhouse will be found exceedingly appropriate for the whole of these plants during the summer season, and the space thus gained for the circulation of air, and the more full admission of light, from their being less crowded by other plants, will be productive of great benefit in causing a more full and perfect maturation of the parts which have been formed during the spring and early months of summer. And those, too, which bloom at that period of the year, will also receive a very great amount of benefit, both in the coloring and

preservation of their flowers; the colors will be produced much deeper and more brilliant, and the blossoms will be retained for a much greater length of time. When in this situation, the daily use of the syringe to supply the plants with moisture should be resorted to, for they are plants which especially delight in atmospheric humidity. Early in the afternoon, and also in the morning, the floors, pathway, stages, and even the plants themselves should be well damped, for the purpose of raising a genial humidity in the house; and this should especially be done in clear bright days, for the purpose of counteracting the parching effects of the sun, which without this precaution would speedily dissipate a great portion of the moisture both of the atmosphere and of the plants.

Some of the species produce seed, and from these young plants may be raised with facility by the following process:—the seeds should be sown as soon as they become ripe; they may be scattered thinly over the surface of a pot of well-drained peat earth, the top of which should have been left in rather a rough and uneven state; over this the seeds may be loosely scattered, but not covered with soil; the pots should, however, be covered with a closely-fitting bell-glass to prevent the evaporation of moisture, and may then be set upon a shelf near the glass in the hot-house. Previously to sowing the seeds, the soil should have been well damped. When the seedlings appear, a little air must be given by occasionally tilting up the bell-glass; and as soon as they are large enough to handle, they may be transplanted several together in the same pot of soil, and afterwards, when a little more advanced, potted singly into small pots, and treated as the established plants.

Besides this method of propagation, as well as that of cuttings and division of the plant, there is also another plan which may be adopted with some of the species. Several of the kinds produce small bulbs in the axils of the principal stem leaves, and when these become matured, which is easily ascertained by their separating readily from the stem, they may be treated just in the manner of seeds, and will produce a supply

of young plants. These little bulbs furnish a means whereby the plants may be distributed with facility and success.

Nothing has yet been done in the way of hybridising the Begonia, and yet there does not appear to be any reason why the same effects should not be produced among these plants, which have been observed and experienced with others; or, in other words, there seems no reason why the good quali-



Fig. 89. *Begonia Martiana*.

chief advantage to be gained from hybridising, in the case of the Begonia, appears to be that of increasing the size of the panicle, and, consequently, the aggregate number of blossoms; in some cases the panicle is large and exceedingly gracefully disposed; while in many others, the bunches of flowers are small and formal, and would admit of increased size and a more elegant disposition, with advantage to the general effect of the plants. The constant flowering habit of one or two of the species, also, is a characteristic which might be communicated to others with advantage. There is hardly scope for effecting much in the way of inducing a greater degree of hardiness among these plants; but, perhaps even something might be done in this way, and whatever might be secured, however trifling in amount, would be so far an improvement. We leave out all speculations as to improving the form of the individual blossoms, for the subject we are treating of is not one likely to suit the tastes of the florist; and his (so considered) improvements would not be appreciated by the admirers of Nature's forms and proportions.

Where the cultivation of any individual family is attempted, in a Wardian case, we know of none which could be chosen which would be so likely to succeed to the uttermost, and to satisfy, by the growth and blossoms produced. Space is the only restriction which need be put upon the kinds employed for this purpose, for the Wardian case is but circumscribed in extent, consequently, in choosing plants for cultivation in it, those should be selected which would have space to grow and produce blossoms, and at the same time leave room enough in the interior to admit of their being seen and examined without difficulty. We may refer to some remarks formerly offered for instructions in the management of plants growing in these cases, the general principles of which are the same in all instances requiring only a slight adaptation to suit the characters of the particular class of plants cultivated. The Begonias, being rather fleshy and succulent in their nature, would require rather less of moisture than plants of a more rigid composition; a loamy soil with abundance of drainage would suit them

ties of several of the species should not be amalgamated into one plant. If this is to be effected, it is by the practice of a judicious course of hybridising. There is not much to be done in the mixing of colors; white and red, and intermediate tints, being all that are at present known. The deep tint of *B. coccinea* might indeed, be imparted to some of the other forms of growth: or even white flowers might be produced in company with the foliage of those kinds which exhibit a considerable deal of red intermixed with dark green; on such a basis as this, pure white flowers would appear very charming. The increase of the size of the flowers of some, and the reduction of the size of the foliage in others, are points which might be aimed at, and would doubtless be accomplished; the former, especially, would be desirable. But the

very well, especially if intermixed with a portion of small lumps of such substances as charcoal, broken bricks, broken free-stone, &c. &c. The smaller growing species, as above referred to, are those which can be grown to the best advantage. For our own part, we should select such as the following, and employ as many of them as we could obtain, or the space would allow: *B. semperflorens*, *reniformis*, *tuberosa*, *ulmifolia*, *dregei*, *hydrocotylifolia*, *coccinea*, *ramentacea*, *parvifolia*, *geraniifolia*, *argyrostigma*, and several others might be named.

DESCRIPTIVE LIST OF BEGONIAS.

Begonia acida, Acid Elephant's-ear. — A stout fleshy-stemmed stove plant, growing three feet high, with large thick fleshy peltate leaves, which as well as the stems are covered with a hoary woolly substance: the flowers are of a clear white colour, borne in large clusters. Native of Brazil. Also called *B. peltifolia*, *B. peltata*, and *B. pauciflora*.

Begonia acerifolia, Maple-leaved Elephant's-ear. — A fleshy-stemmed stove species, with pale-coloured flowers, introduced from Brazil.

Begonia acuminata, Pointed-leaved Elephant's-ear. — A slender-stemmed stove plant, growing from three to four feet, with unequal acuminate cordate hairy leaves and pink flowers in small clusters from the axils. It blooms all the year. Native of Jamaica.

Begonia acutifolia, Acute-leaved Elephant's-ear. — A fleshy-stemmed stove plant; the leaves are obliquely cordate, and narrow at the point; it bears panicles of white flowers in August. Native of mountains in Jamaica.

Begonia alba-coccinea, Scarlet and white Elephant's ear. — A very handsome herbaceous stove species, with short, somewhat creeping stems; large oblique peltate, or shield-shaped, almost kidney-shaped leaves, and loose spreading panicles of flowers, which are bright red externally, and white within. It is from the East Indies, and blooms throughout the spring and summer months.

Begonia argyrostigma, Silver-spotted Elephant's-ear. — An erect, branching, shrubby stove plant, handsome even when out of flower, for its leaves are distinctly spotted with white; they are semi-cordate and oblique, red beneath; the flowers are white, in small drooping panicles. It blooms during the spring and summer months. Native of Brazil. Also called *B. maculata*, and *B. punctata*.

Begonia aptera, Wingless Elephant's-ear. — A branching-stemmed stove plant, with large oblique ovate leaves, and producing graceful clusters of white flowers during summer and autumn.

Begonia barkeri, Barker's Elephant's ear. — An herbaceous green-house species. It has very large roundish leaves, and white flowers, produced in a huge mass on a foot-stalk four feet high, chiefly in the autumn months. Native of Mexico.

Begonia bulbifera, Bulb-bearing Elephant's-ear. — A small tuberous herbaceous stove species, with pink blossoms, produced in September, October and November. It is from Peru.

Begonia castaneæfolia, Chestnut-leaved Elephant's-ear. — A slender-stemmed stove species with ovate leaves, and blush-coloured flowers, produced from February to April. Native of Brazil.

Begonia coccinea, Scarlet Begonia. — A very handsome, somewhat fleshy-stemmed stove plant, of compact branching habit, with unequal oval acuminate dark green leaves, red beneath; the flowers are numerous, and remain a long time on the plant; they are of a brilliant scarlet or crimson, in small spreading axillary panicles. Flowers through the summer months. Native of the Organ mountains of Brazil. Also called *B. rubra*.

Begonia crassicaulis, Thick-stemmed Elephant's-ear. — This has short fleshy stems with deciduous leaves and white flowers; profusely produced in spring after the stems are leafless. It is from Guatemala. The leaves are large and palmate.

Begonia dichotoma, Two-forked Elephant's-ear. — An erect shrubby stove plant four to five feet high, with large unequal cordate leaves, and branching panicles of white flowers. It flowers in July and August. Native of the humid woods of Caraccas. Also known as *B. longipes*, and *B. macrophylla*.

Begonia dipetala, Two petaled Elephant's-ear. — A stove plant with naked fleshy stems, four feet high, and narrowish oblique heart-shaped leaves, which when young, are faintly spotted with white. From the axils of the leaves are produced the pale pink flowers in small drooping clusters. Flowers from April to July. Native of Bombay, and other parts of the East Indies.

Begonia diptera, Two-winged Elephant's-ear. — A stemless stove perennial, with unequally cordate leaves, and white flowers, produced in June. Native of the Cape of Good Hope.

Begonia digitata, Fingered Elephant's ear. — A rough erect-stemmed stove species, growing three feet high, with digitate leaves and white flowers, produced during the summer. Native of Brazil.

Begonia discolor, Two-colored Elephant's-ear. This is a common species, with large dark green hairy leaves, red beneath, which is found in many parlour windows. It is an annual stemmed plant, bearing large pink flowers on a drooping panicle, from May to September. It is a native of China, and is also known by the names of *B. evansiana*, and *B. bulbifera*. It is sometimes commonly called the Beef-steak Plant. At Killanley Glebe, Bollima, some plants of this have been growing in the open air for several years.

Begonia disticha, Distichous Elephant's-ear. — A fleshy-stemmed stove species, with acute leaves, and two-forked bunches of whitish flowers. It blooms from June to October. Native of South America.

Begonia dregei, Drege's Elephant's-ear. — A small fleshy-stemmed erect stove plant; growing from two to three feet high, with small oblique angular leaves; the flowers are blush-white, generally in pairs. It blooms in March. Native of

the African continent. It is also known as *B. parvifolia*, *B. floribunda*, and *B. semperflorens*.

Begonia dubia, Doubtful Elephant's-ear.—An herbaceous stove species, with unequally cordate leaves, and white flowers, produced in July. Native of Brazil.

Begonia fagifolia, Beech-leaved Elephant's-ear.—A creeping-stemmed stove plant with ovate leaves, which together with the stems are covered with soft white hairs; it bears small white flowers in great profusion in the spring months. Native of Brazil. Called also *B. pendula*, and *B. repens*. It is beautiful grown on a trellis.

Begonia fischeri, Fischer's Elephant's ear.—A branching-stemmed stove species, growing two or three feet high: the leaves are rather small, unequally cordate, silky above and crimson beneath; the flowers are blush-coloured. It blooms from February to April. Native of Brazil.

Begonia geraniifolia, Geranium-leaved Elephant's-ear.—A tuberous-rooted herbaceous stove species, with small wavy leaves, like those of a geranium, and pretty deep pink flowers. It blooms in September and was introduced from Lima.

Begonia heracleifolia, Heracleum-leaved Elephant's-ear.—A strong-growing herbaceous species, with large palmated leaves, the stalks of which are two feet long, covered with white hairs, which rise from crimson spots: it has large bunches of blush or pale pink flowers. Though rather coarse, it is a very pretty species. It blooms in the spring; and comes from Mexico.

Begonia hirsuta, Shaggy-leaved Elephant's-ear. A fleshy-stemmed, herbaceous stove-plant; the leaves hairy, unequally semicordate; the flowers are white. It is a biennial, flowering in May and June. Native of the West Indies.

Begonia hirtella, Fringed Elephant's-ear.—A slender-stemmed stove-species, from three to four feet high, with unequal, pointed leaves, and white flowers, produced in small clusters, from July to October. It is from the West Indies. Sometimes called *B. acuminata*.

Begonia homonyma, Kindred Elephant's-ear.—A fleshy-stemmed stove plant, resembling *B. parvifolia*, growing from two to three feet high, with unequally angled leaves, and white flowers. It blooms during the summer and autumn. Native of Brazil. Also called *B. sinuata*.

Begonia hookeri, Hooker's Elephant's-ear.—This is the *B. semperflorens* of some authors. It is a very pretty species, with short stems, and nearly round leaves, which are bright green, smooth and shining; it has pure white flowers in short panicles from the axils of the young leaves. It blooms through the greater part of the year, and was introduced from Mexico. It is also sometimes called *B. spatulata* and *B. grandiflora*.

Begonia humilis, Dwarf Elephant's-ear.—A fleshy erect-stemmed stove-plant, of dwarf habit, with semi-cordate, oblique leaves, and white flowers, which open in September and October. It is a biennial. Native of the West Indies.

Begonia hydrocotylifolia, Hydrocotyle-leaved Elephant's-ear.—A dwarf, stemless, or very short-stemmed stove-plant, with numerous round, shin-

ing, dark green fleshy leaves, reddish beneath; and loose panicles of numerous light pink, very handsome flowers. It is one of the handsomest of the whole genus. It flowers in March and April, and remains a long time in bloom.

Begonia incana, Hoary Elephant's-ear.—An herbaceous stove species, which has hoary leaves, and pink and white flowers. It is from Mexico, and blooms from April to July.

Begonia incarnata, Flesh-coloured Elephant's-ear.—A branching stove-plant, with stems four feet high, large oblique, dark green leaves, and pale pink flowers, in good-sized clusters. It blooms almost throughout the year. Native of Mexico.

Begonia insignis, Remarkable Elephant's-ear. A fleshy-stemmed, erect-growing, stove-plant, with unequally cordate, acuminate leaves, and spreading, drooping panicles of large, handsome pink flowers. It blooms in December and January. Native of South America.

Begonia laurina, Bay-leaved Elephant's ear.—A strong, branching-stemmed stove species, growing four feet high, with ovate, beautifully serrated leaves, and graceful clusters of pink flowers; produced in summer.

Begonia longipes, Long-stalked Elephant's-ear. A sub-shrubby, fleshy-stemmed plant, growing five feet high, with large, unequally-lobed leaves, and clusters of white flowers on very long stalks, produced from April to August. Native of Mexico. Also called *B. macrophylla*, and *B. odorata*.

Begonia manicata, Collared Elephant's-ear.—An herbaceous, perennial stove-plant, with broad roundish, shining, light green, fringed leaves, the stalks and under part of which are furnished with a peculiar sort of scalliness, which is called manicate by botanists; the flowers are produced in a large spreading panicle, and are of surpassing grace and beauty, very numerous, and of a delicate pink colour. It blooms in February and March. Native of Brazil.

Begonia martiana, Martius' Elephant's-ear.—A very handsome delicate, herbaceous-stemmed stove plant, with tuberous roots, and obliquely ovate leaves; it has numerous axillary, usually two-flowered peduncles, bearing very large deep pink flowers. It blossoms in the summer and autumn months. It is one of the most beautiful of the whole family, and was introduced from Brazil.

Begonia meyerii, Meyer's Elephant's-ear.—A woody-stemmed, erect-growing, unbranched stove plant, growing four feet high, with roundish, woolly leaves, and dense clusters of white flowers, produced in February, March and April. Native of Brazil.

Begonia monaptera, One-winged Elephant's-ear. An herbaceous, tuberous-rooted, stove species, with somewhat reniform leaves, and white flowers. Introduced from Brazil; and blooms from August to November.

Begonia multibubillosa, Bulbillose Elephant's-ear.—A tuberous rooted, herbaceous species, which produces numerous bulbils, or little bulbs. It has roundish leaves, and pink flowers. It blooms from May to September. It is a native of Brazil.

Begonia muricata, Rough Elephant's-ear. — A rough erect-stemmed species, growing three to four feet high, with digitate leaves and close panicles of numerous small white flowers. It blooms in autumn, and probably at other seasons. Sometimes called *B. digitata*. Native of Brazil.

Begonia nitida, Shining-leaved Elephant's-ear. A straggling, woody-stemmed stove plant, of moderate size, with smooth, oblique, cordate leaves, and large, drooping panicles of pink and white flowers. It flowers from May to September, and more or less through great part of the year. Native of Penang. Called also *B. obliqua*.

Begonia octopetala, Eight-petaled Elephant's-ear. — A stemless, tuberous-rooted stove plant, with unequal cordate leaves, and greenish white flowers, produced in October. Native of Lima and Peru.

Begonia odorata, Sweet-scented Elephant's ear. A slender-stemmed stove species, growing four feet high, with large, unequal, smooth leaves, and large clusters of white flowers, produced during the spring months. Native of South America. Also called *B. suaveolens*.

Begonia palmata, Palmated Elephant's ear. An herbaceous species from Nepal with palmated leaves, and pink flowers. It blooms from May to September.

Begonia papillosa, Pimpled Elephant's-ear. — A fleshy, erect-stemmed stove plant, with large broad cordate leaves; very rough, being covered on both sides with rigid hairs. The flowers are produced in loose panicles, and are of a rose-pink colour. It flowers from July to September. Native of Brazil.

Begonia parvifolia, Small-leaved Elephant's-ear. — A very neat branching-stemmed compact growing stove plant, with small angulated oblique leaves, and little clusters of bluish-white flowers, produced throughout the whole summer; it is a very neat looking plant. Native of the Cape of Good Hope. It is sometimes called *B. floribunda*, and *B. semperflorens*.

Begonia patula, Spreading Elephant's-ear. — A fleshy-stemmed stove species; the leaves are unequally cordate, the flowers bluish-coloured. It flowers from May to September, and comes from the West Indies.

Begonia picta, Painted-leaved Elephant's-ear. A tuberous-rooted herbaceous species of low growth, flowering when about six inches high; the leaves are dark green above, red beneath, and hairy, of a heart-shaped figure; the flowers are large, pale pink, elevated in small clusters above the foliage. It flowers from June to September. Native of Nepal. This species would probably grow freely in a warm green-house.

Begonia platanifolia, Plane-leaved Elephant's-ear. — This is a strong growing fleshy-stemmed stove species, with large angulated leaves and pinkish flowers. It blooms from May to September. Native of Brazil.

Begonia pulchella, Pretty Elephant's-ear. — A stove species from Brazil; the leaves are semi-cordate, and the flowers are white. Blooms in July and August.

Begonia petaloides, Petaloid Elephant's-ear. An herbaceous stove species, with angulated leaves and white flowers, blooming in April and May. Native of Brazil.

Begonia rupestris, Rock Elephant's-ear. — A slender stemmed stove species, growing from two to three feet high, with oblique ovate leaves marked with white silvery dots, and pink flowers, produced in spring. Native of Brazil.

Begonia ramentacea, Scaly Elephant's ear. — A handsome stove plant, with very short thick stems, and large obliquely ovate leaves, red beneath, above which the clusters of blossoms, whitish, delicately tinged with pink, are gracefully disposed in spreading panicles. It blooms several times in the season. It was introduced from Brazil.

Begonia reniformis, Kidney-shaped leaved Elephant's-ear. — A fleshy-stemmed stove plant, with kidney-shaped unequal leaves, and panicles of white flowers. It blooms in July and August. Native of Brazil.

Begonia rubricaulis, Red-stemmed Elephant's-ear. — An herbaceous stove perennial, with large oblique cordate glossy leaves, and close panicles of large showy red and bluish flowers; the flower stems and leaf stalks are of a bright red. The native country is not ascertained. It blooms from June to October.

Begonia sinuata, Sinuated-leaved Elephant's-ear. — An erect branching-stemmed stove species, growing about three feet high, with large oblique leaves like those of *B. odorata*, which this plant altogether resembles. It bears white flowers during the spring months. Native of South America.

Begonia sanguinea, Blood-coloured Elephant's-ear. — An upright plant, growing three feet high, with fleshy stems, unequally cordate leaves, dark red beneath, and bunches of small white flowers. It blooms from July to October. Native of Brazil.

Begonia scandens, Scandent Elephant's-ear. — A scandent or climbing stove plant, with ovate, sub-round leaves, and small greenish white flowers. It blooms in July and August. Native of Jamaica and Guiana. Also called *B. glabra*.

Begonia sellowii, Sellow's Elephant's-ear. — This stove species has white flowers produced in September.

Begonia spatulata, Spatulate leaved Elephant's-ear. — A succulent-stemmed stove plant, growing two or three feet high, with oblique and somewhat oval leaves, pale beneath, and small bunches of pale pink or whitish flowers, which are very freely produced; the plants are scarcely ever out of bloom. Native of Brazil. It requires the stove in winter, but bears a good deal of exposure in summer, as doubtless many others would do were they tried. Also called *B. cucullata* and *B. grandiflora*; sometimes *B. semperflorens*.

Begonia stigmosa, Spotted-leaved Elephant's-ear. — This is rather a pretty stove species, with a short stem, and oblique cordate leaves, curiously fringed on the margin, and beautifully marked with purple spots; the flowers are greenish-white, in loose panicles.

Begonia tuberosa, Tuberous Elephant's-ear. — A tuberous-rooted dwarf stove plant, with cordate



FIG. 90. SWISS COTTAGE.

[Horticulturist, Feb. 1877.]

oblique leaves, and pinkish-white flowers. It blooms from July to September. Native of Amboyna.

Begonia ulmifolia, Elm-leaved Elephant's-ear. An erect branching-stemmed stove plant, with ovate, elm-like, unequal leaves, and small panicles of blush-white flowers. It blooms from May to October. Native of America.

Begonia undulata, Wavy-leaved Elephant's-ear. A shrubby, taper-stemmed plant, with oblong wavy leaves, and large drooping clusters of white flowers, blooming from August to December. Native of Brazil.

Begonia villosa, Villose Elephant's-ear. — A

fleshy-stemmed stove species, with semi-cordate leaves and white flowers, blooming from August to October. Introduced from Brazil.

Begonia vitifolia, Vine-leaved Elephant's ear. An upright, fleshy-stemmed stove species, growing three to four feet high, with large peltate unequally toothed woolly leaves, and large drooping clusters of white flowers. It is from Brazil.

Begonia zebrina, Zebra-striped Elephant's-ear. A strong, branching, streaked-stemmed stove plant, with large oblique leaves, beautifully marked with dark green shades on the under side, and bearing clusters of pink flowers in March and April. Native of Brazil.

HINTS ON SWISS COTTAGES.

BY A YOUNG ARCHITECT, OF NEW-YORK.

DEAR SIR—I have read the remarks on Rural Architecture, contained in the leaders of your numbers of this journal, for September and October, with entire satisfaction. The article bearing the name of the editor of this journal, which is published in the Transactions of the State Agricultural Society, on the subject of "Farm Houses," seems to me to contain "multum in parvo," the soundest principles on this subject.

That country houses, farm buildings, cottages, and the like, to please a philosophical mind, must, in a suitable degree, convey some idea of the life and habits of the occupants of the same, is a principle, which I regret to see, so few of our architects, and fewer still of mere carpenters and builders, have any real and practical idea of. Hence, we so often behold *town-houses*, built in the country, or in the suburbs of villages, where they have no proper place; where, indeed, they have no more *fitness*, than a true *cockney*, whose locality is the *pavé*, has, when he is found seated on a mossy bank, in some wild and picturesque mountain dell.

The simple bracketted country house, which forms the leading illustration of the October number, may be considered as one

in a very pleasing and satisfactory style for all country buildings, of a middle class. It appears to be a modification, suited to our wants, of the Swiss mode of building.

This leads me to suggest to you, the latter style, as having, with suitable modifications, strong claims to attention, for those who are about building in mountains, rich sylvan, or picturesque parts of country. In such districts, it is, as all families and tourists will readily grant, strikingly appropriate.

But it also has some distinct merits, for rural purposes, in this country. To begin; it is always built of wood, which is the material most easily obtained, every where in America; even of the roughest logs, may a picturesque Swiss cottage be constructed. Then there is a certain *rudeness* about the style, which even the commonest country builder, could not well fail to achieve. Next, the widely *projecting eaves*, shelter and make cool the apartments, during our hot summer solstice, and indeed may be made, as they often are, in Swiss examples, to afford, by their broad projection, a fine substitute for the piazza or verandah, all around the house.

I send you a sketch, from a late English publication, of an Anglo-swiss cottage, which is built in one of the noblemen's parks.* It is only one of fifty ways of varying this pretty rustic mode of building. The better rooms, you will observe, are all on the second floor, to which access is had by the flight of stairs, outside. This conducts you to the *open gallery*, which, being completely covered and shaded by the projection of the roof, makes a most agreeable lounging, reading or working place, in hot weather.

The kitchen, cellar, &c., are on the *ground story*, which is level with the surface. This, you will observe, is a superior mode, to the

"basement," or half-sunk story, so common in many houses, and in which some families pass half their time—and superior, because it is *well lighted and aired*.

A building of this style and size, could be put up in any part of the country, where wood is abundant, by ordinary mechanics, for a few hundred dollars. I do not send it to you, as a remarkably good specimen of the Swiss Cottage, but only to draw your attention, and that of the tasteful portion of your readers, to the many merits of the style in question. I am, dear sir,

Yours, sincerely, A YOUNG ARCHITECT.

New-York, Jan. 8th, 1847.

NEW AND SINGULAR CHINESE PEACHES.

WE have had the pleasure of receiving very lately, from one of our subscribers, in this neighborhood, JOHN CALDWELL, Esq., some stones of what is evidently a new and very distinct kind of Peach. They were fresh from Canton, whence they were sent to Mr. Caldwell, by his friend and correspondent there, Dr. J. T. DEVAN. They are called in the letter from this latter gentleman, which accompanied them, "*pits of the Honey Peach*." We give the following extract from this letter :

"Canton, June 18, 1846.

"I have received as a present, from a Chinese gentleman, a few "*Honey Peaches*." I have never been able to procure any such at the fruiterers.

"I herewith send you the pits. These peaches are remarkable for their honied sweetness, and are ripe about the first of June. Their shape is also peculiar, it being like the sketch on the opposite side of this paper [which we here give. ED.] :—form,

pointed at one end, rich yellow and red in colour, *very* deeply grooved, and about the size of this sketch.

Yours, with respect,

J. T. DEVAN."



Fig. 91. The Honey Peach.

We have planted these seeds, and hope to be successful in raising some trees, of

* [See our FRONTISPICE, Fig. 90, for this engraving.—ED.]

what would appear, from the outline and the stones, to be a new, very distinct, and desirable *species* of peach.

We find in the *Transactions of the Horticultural Society, of London*, an article prepared by LINDLEY, on the fruits known in China, from which we copy the following very interesting paragraph :

"Of *Peach trees*, there are three principal kinds ; the *Dwarf* peaches, the *Peach Bushes*, and the *Tree Peaches* ; of each of which, there is a vast variety of sorts. The two first, are principally esteemed for their flowers, and as objects of ornament. The *Tree* peaches are what the Chinese cultivate for the sake of their fruit ; and some of them grow to the height of 40 or 50 feet ; but these latter seem to be of a particular kind, and the fruit is of middling quality. In favorable seasons, the markets of Pekin abound in the greatest variety of peaches ; some of which arrive at prodigious size, being much larger than they are in France. The Chinese gardeners speak of fruit weighing *two pounds* ; and Marco Polo asserts that he has seen them of that size in the district of Cang-chew. The largest, however, which the French Missionaries at Pekin, ever saw, were about three inches and a half long, and three inches broad. These large varieties are very beautiful, but their taste is generally inferior to their appearance. Those, however, of Saing-chou, (a villa of the Emperor's) equal the most melting and delicious of Europe ; more especially one sort, which is late and of indifferent appearance, but of an exquisite flavor. The varieties are classed according to the form, colour, size, and time of ripening of the fruit. Some have a green flesh, others white, pale yellow, orange, and marbled ; their form is flat, round, oval, or produced on one side into a beak, which again

is either curved or straight. The gardeners possess the secret of preserving fruit gathered in October, until January, and with all the beauty, freshness, and flavour, which it possessed when first taken from the tree. Although well acquainted with the European method, they prefer budding their fine kinds upon stocks raised from seeds of the best varieties."

One of the greatest curiosities, among the many kinds of this most excellent fruit, is the "*Flat Peach of China*." (*Fig. 92.*)



Fig. 92. The Flat Peach of China.

This variety was introduced into England, some years ago, from China, and is enumerated in the Catalogue of the London Horticultural Society's Garden ; but we believe no one has yet succeeded in introducing it into this country—spurious sorts having once or twice been received under this name. We have no doubt, however, that some of our zealous collectors of new fruits, if they have not already yet correctly received it, will do so, the coming spring.

This curious fruit must be well known in

China, as drawings and screens brought here from that country, very often contain representations of it. The fruit is so much compressed at both ends, that it looks as if it had been forcibly flattened, till the pulp became crowded to either side, and only left a mere covering of the skin over the stone, at either end. Its diameter through the flattened part, is only about three-fourths of an inch, while across the broadest way, it is nearly three inches. The skin is slightly downy, pale yellow, mottled with red on the sunny side. The stone is quite small, flattened and rough. In flavor, it is said to be that of a good melting peach, with a slight noyau or nectarine taste. It is stated in a late number of the *London Horticultural Magazine*, that this variety has recently been received from Java, by Mr. KIRKE, the English nurseryman, who has propagated and sold it, as the Java Peach. It had no doubt, adds this pe-

riodical, been carried there from China. We learn that the Flat Peach of China, is, in a mild climate, nearly evergreen. In England, "against a wall in the Horticultural Society's garden, it keeps growing throughout the winter, when the weather is not too severe." (*Arb. Britannicum*.) To this, Mr. THOMPSON has added, that it may be forced and ripened in pots, earlier, and with greater facility, than any other variety.

All the Chinese Peaches, will, no doubt, prove perfectly hardy here; and we look for some decided acquisitions, in varieties that may be had from that country. The Pekin winter is almost precisely ours, and plants from that part of China need no acclimating here. We hope our China merchants will at least order home seeds of all the different kinds of peaches. The new varieties they may produce, will be of far more value to us, than to Europeans, since this fruit thrives so well here.

REVIEW.

THE LADIES' FLOWER GARDEN OF ORNAMENTAL PERENNIALS. BY MRS. LOUDON. London, 1844, 4to., 2 vols., with many colored plates.

THE LADIES' FLOWER GARDEN OF ORNAMENTAL ANNUALS. BY THE SAME. London, 1842, 1 vol., 4to., pp. 272, with many colored plates.

A couple of beautiful quartos from the London press, which we cordially commend to all lovers of flowers. They are richly stored with portraits, drawn and colored to the life, of all the best treasures that Flora has in her gay parterres of annuals and perennials.

The cultivation of these two classes of flowers is, for the most part, so easy and simple, that many of our fair readers are tempted to engage in it, both for recreation and out of the pure love which all refined

natures must instinctively have for these brightest and loveliest of earth's wonders—many indeed for whom the orchard, the kitchen garden, or the farm, have no especial attractions.

How gladly would we lend our little aid to promote, more generally, among our countrywomen, this pure, wholesome, and refreshing taste. This taste, which leads them into the open air, under bright and healthful skies—this labor, not severe, but gently exciting, which gives to exercise a meaning, and a pleasure, which no forced walks or obligatory calisthenics ever have or can have. Would that we could wage a successful war against perpetual *stitchery*, and, like the loadstone mountain in the

Arabian nights, draw, at least for a little while, all the needles out of the many fair hands whose possessors think them the only befitting implements of occupation, and magnetize such persons daily into the light cares of the garden, in the soft and cool air of our summer mornings and evenings. The joy, the interest, which the personal cultivation of flowers gives to a garden itself, is a thing but too little understood in America. To one who knows flowers by this kind of individual care, this daily interest in the unfolding of every new beauty, a garden has an *intensity* of meaning which common observers know nothing about. The difference between their enjoyment and that of the mere pleased idler in a garden, is the difference between Sir JOSHUA REYNOLDS' informed delight in the great paintings in the Sistine chapel, or HAZLITT's in the gallery of the Louvre, and that of the common-place tourist who goes every where to see sights, with his guide-book in his hand, and truly sees and feels nothing.

Mrs. LOUDON's works before us, are executed in a very clever and excellent manner, which does credit to her knowledge and good taste. The grouping of the flowers themselves, which are presented in each plate, is more agreeably managed than we remember to have seen it previously done.

The chief value of these works to Horticultural readers generally, lies in the excellent means it affords them of *selecting* from the great variety of beautiful plants, which now enter into the catalogues of seedsmen and dealers, such as are really most desirable for the objects which they have in view.

The directions for culture, with which these works abound, are simple and perspicuous. "It is a common error," says Mrs. Loudon, in her preface, "to suppose that

all that is necessary to make a showy flower garden, is to sow the ground with a great many different kinds of flower seeds. A few flowers of the most brilliant and ornamental kinds, arranged so as to harmonize in their colors and habits of growth, will produce more effect than three or four times the number sown injudiciously, and afterwards comparatively neglected. On looking into most flower gardens, it will be found that the annuals are crowded together, each tuft having been left unthinned; and that plants, having been neither trained nor pruned, present, as they grow up, the most tawdry appearance, without either the grace and elegance of wild nature, or the trimness and neatness of art. A flower garden is essentially artificial; not only from the avowed art displayed in its general shape, and in the artistical form of its beds, but in the flowers of so many different countries, and even climates, being brought together in the same locality. Every thing in short in the flower garden shows that it was planted by the hand of man; and the flowers themselves, to be in keeping with the garden, should show also the hand of man in their training."

The group of flowers which forms each plate, is composed of *allied* genera, so that the tyro in botany may take a pleasant lesson in the natural orders while turning over the leaves.

These works have had a large and well deserved sale in Great Britain. There is unfortunately no mode of cheapening expensive colored plates in this country, so that their possession here, must, owing to their price, be confined within a small class. To those who can indulge in the luxury of beautiful works, we cordially present these as also full of interest and instruction on the subjects treated of.

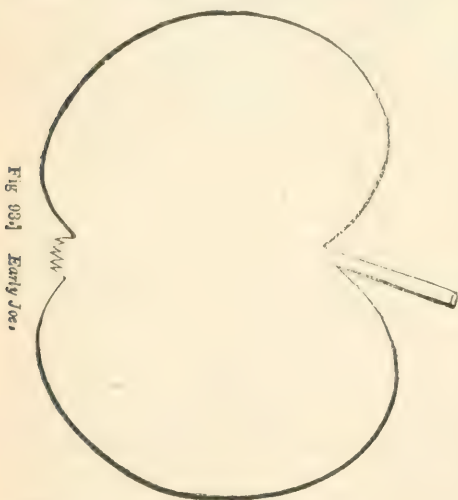
DOMESTIC NOTICES.

THE EARLY JOE APPLE—The "Early Joe" is a most desirable fruit. Sprightly, without unpleasant acidity, rich, but not cloying, plentiful in juice, but not watery; it combines in an eminent degree all those qualities which are acceptable to most persons, in a dessert apple. We think it may safely be set down as equal to the best of any season. It originated in the orchard of Oliver Chapin, East Bloomfield, Ontario county, N. Y.

Fruit, medium size, roundish, considerably flattened; skin smooth and shining, when well grown; if crowded, black spots are not unfrequent; nearly covered, where exposed to the sun, with irregular stripes of deep and pale red, through which appear numerous green spots.

Stalk, rather slender, and inserted in a deep, and generally russeted cavity. Calyx small, closed; ends of the segments reflexed.

Flesh white, extremely tender, of a mild, and most agreeable flavor. Ripe middle of 8th month. Tree has slow growth, and dark colored wood and foliage. W. R. Smith. Macedon, 12th mo. 1846.



[Mr. SMITH also obligingly sent us, with the above, an outline and description of the *Onondaga* pear, which, since it has been fully described in our last number, we omit.—ED.]

THE PEAR BLIGHT—Dear Sir: I am inclined to think that the opinion of your correspondent in the December number of the *Horticulturist*, with respect to Pear Blight, is plausible. So far as I know, there has none of it appeared in this region, for nearly twenty years. About that time, it made its appearance in this city, and prevailed for two or three years, during which time, it swept off almost all our trees. The disease did not extend to

my father's farm on the Mohawk flats, a mile west of this city, until a year or two after it commenced here. And out of about thirty fine young pear trees, just beginning to bear, in two years, only one, a St. Germain, was left; this tree yet survives. Every few years, the thrifty young branches of the Plum and Quince, as well as the Peach, are killed by the severe frosts of our winters: yet nothing like the Pear blight, makes its appearance in them the following summer, so far as I have noticed. The Pear tree now thrives finely with us, and we raise all the fine old varieties, viz: *White Doyenne*, *Brown Beurre*, *St. Germain*, *Gansel's Bergamot*, &c., in great perfection.

I have been told, that the late Rev. Dr. REED, of Poughkeepsie, in several instances, restored to health Pear trees diseased with blight, by putting a peck or so of blacksmith cinders about the roots of each tree. He was led to try this remedy by observing that the Pear tree flourished finely in the iron region of Connecticut.

I have kept a record of the weather for something like fifteen years, and if you think it worth having, I will send you the time of the blossoming of our fruit trees during that period. There has been a difference of about thirty days in the bloom of the earliest and latest seasons. Yours truly, Charles H. Tomlinson. Schenectady, Jan. 1847.

REMARKS—The account here given of the Pear blight, would seem to indicate that it is the *insect blight*, and not the *frozen sap blight*, which is known in Schenectady; and indeed it is the former which is generally seen in the middle and eastern states: the latter being more prevalent in the west, on account of the richness of the soil and coarseness of the growth there. If the blight at Schenectady had been owing to an *atmospheric* cause, as the article referred to suggests, it would not have been a whole year travelling to an adjacent farm, one mile distant; though this is a very natural result in the migration of an insect. We shall be glad to hear as many facts as possible, touching this disease, in all parts of the country.

We shall have more to say, soon, on this interesting subject, which we have before alluded to—the beneficial effects of iron upon the pear tree.

THE NORTHERN SPY.—In looking over the back numbers of the *Horticulturist*, I noticed some remarks which previously escaped my attention, relative to the character of this apple. The opinion stated by W. R. SMITH in a former number, is quoted with the approval of the editor, that this fruit, "however valuable for the garden or the small orchard, is *worthless* as a market fruit, compared with the Baldwin, Newtown Pippin, or Roxbury Russet." It is the more necessary that I should notice this remark, as the "*Fruit Culturist*" is cited as "expressing the same opinion."

In that work it was stated, that the deterioration of this variety on old trees is "a drawback on its value; and it was noticed solely to call the atten-

tion of cultivators to the fact, which before had escaped public notice. It was by no means intended to assert that this defect was peculiar to the variety, or was greater than in some other fine sorts. Instead of being "worthless," as a market fruit, compared with the Newtown Pippin, it is here, in Western New-York, most obviously superior to it. I can hardly conceive how a person, well acquainted with the growth of both varieties, could have so contrasted them. On many bearing trees of both, I have never seen Newtown Pippins at all equalling, in fine and fair appearance, good specimens of the Northern Spy.

That old, stunted trees of the Northern Spy, produce inferior fruit, all admit; and that it is more defective in this particular than the Baldwin and Rhode Island Greening, is not disputed. But this is the case only on stunted or slowly growing trees. A tree of this variety was noticed the past season, with a very old and partly decayed trunk, and which a few years ago had been freshly pruned and kept cultivated, which sent new vigor into the branches; and as a consequence the fruit was perfectly fair and of the largest size, averaging three and a quarter inches in diameter. On another tree, standing in an old pasture, which had been grafted eighteen years, the specimens averaged from two and three quarters to three inches in diameter. Another tree, standing in old grass ground, which had been grafted on the old trunk about twenty-five years, was loaded with fruit, many of which were carefully measured. About one half of the crop were two and three quarters to three inches in diameter; the other half mostly varying from two to two and a half inches. I state these measurements to give an exact idea of the real size of this fruit under ordinary circumstances. Under the best culture, and proper pruning, they would doubtless have been much larger.

The rule may be laid down as nearly invariable, that in all cases the fruit of the Northern Spy will be large, fine, and handsome, provided the pruning and cultivation are sufficient to maintain a vigorous growth of the young branches. Cultivation which does not produce this effect, will not accomplish the desired object.

With regard to the value of this fruit for "market," I need only state, that it commands a price two or three times as great as the Spitzenberg, Rhode Island Greening, and other fine winter varieties. One cultivator sold his entire crop the past season for \$2.50 per barrel, while most of our best winter fruit has sold considerably less than a dollar per barrel.

I must respectfully ask leave to dissent from the opinion expressed by the editor, that the fertility of the soil, in this neighborhood, is such as to give fine fruit without cultivation. The practical adoption of this opinion by many of our farmers, has been seriously detrimental to the successful cultivation of fruit. The crops on large as well as on small trees, have been astonishingly improved in quality and augmented in quantity, by manuring and tillage. In many instances, I have never seen an exception. Indeed, in some cases, the improvement has been such, as to cause quite an alte-

ration in character, so that specimens were not readily recognized by those who had been familiar with the variety on uncultivated trees. *J. J. Thomas. Macedon, 12 mo. 26, 1846.*

Note.—A young man, a resident of East Bloomfield, where the Northern Spy originated, and where a number of old trees exist, who is familiar with fine fruit, and extensively acquainted with the orchards of that place, was asked what other well-known variety he would place, by way of comparison, by the side of the Northern Spy, in the defective character of the fruit. He replied by naming the *Svaar*, which he considered about equally defective on old trees.

REMARKS.—When a new fruit comes suddenly into great repute, as this *Northern Spy* Apple has done, it is difficult at once to ascertain what are its precise merits from those partial judges who have been its friends and god-parents. Our friend THOMAS was, we believe, the first to impeach the superlative excellence which the friends of this "Spy," about Rochester, claimed for it; which he did in the following words—"The liability of the fruit to become scrubby on old trees is a drawback on its value. The owner of the original orchard succeeded, by selecting from 75 barrels, in getting only fifteen fit for market."—(*Fruit Culturist*, p. 100.)

We are glad to find from Mr. THOMAS' more mature opinion, that this really admirable apple is likely to prove a better orchard variety than he at first supposed.

With regard to the fertility of the soil, and its adaptation to the growth of the apple, our remarks, to which our correspondent refers, were intended to apply to the vicinity of Rochester. Without intending to say that fruit trees are not greatly benefitted by care and cultivation in the best soil in the world, we simply stated what we saw in the vicinity of that city—viz: apple trees which had simply been planted and allowed to grow as they pleased, and which, so excellent is the soil, were as luxuriant, and bore as fine fruit as we ever saw produced elsewhere by the best orchard cultivation. It is easy to see that this will last only so long as the virgin fertility of the soil continues.

Of the soil at Macedon we know nothing, as we have never had the pleasure of visiting that place. But, judging from specimens of fruit, and young trees, which have been sent us thence, we should suppose it much less fertile than that of Rochester.

The Newtown Pippin is the most profitable orchard apple that is grown, where the soil is adapted to it. We need only mention that the crop of a single orchard of Newtown Pippins on the Hudson, was sold in 1845, for over \$8,000, (most of them at \$4 per bl.,) to settle this point. It is quite remarkable, however, that there is only here and there soil that suits this finest of American Apples. The West generally does not produce it. It does not succeed well even about Rochester, where almost all other sorts grow so well. But we learn that there are a few localities on the Ohio, where it bears most abundant and excellent crops.—*Ed.*

FRUITS IN OHIO.—In the November number of the "Horticulturist," an article appears under the above heading, from W. H. SCOTT of Toledo, in which Mr. SCOTT says, "Probably more and finer varieties of the Cherry are exhibited at the Cleveland Horticultural Society's shows, than can be found elsewhere." To this remark the editor appends a note, saying that, "one-third more varieties were shown at the Dutchess county, N. Y., Horticultural Society's exhibition in June last."

At the Cleveland exhibitions which were held weekly, there was at one time exhibited *thirty-three* varieties of the Cherry, under the names found and described in Downing's "Fruit and Fruit Trees of America," together with a new variety introduced by Germans, and ripening ten days earlier than the May Duke. Also the "Swedish" Cherry, a variety apparently unknown to eastern cultivators, which resembles the American Heart in qualities, but ripening at the same time with the May Duke. These two named varieties, make *thirty-five* varieties shown at one time under name. At the same time specimens of some eight or ten seedlings were shown, which promise to equal, if not rival, many varieties already under name. We do not pretend that each and all of these varieties of the Cherry were in perfection at the time of exhibition: but did the Dutchess county society of N. Y., exhibit "one-third more varieties" in perfection?

[About forty varieties were, we believe, shown by the Dutchess county society—thirty by one contributor. We are most happy to learn that such a fine collection exists in the north of Ohio.—ED.]

The state of Ohio has probably produced more fine seedling fruits than any other one. Many are as yet comparatively unknown beyond their own locality. And from no other cause than from the want of a herald. The northern part is especially fruitful in seedling apples; many of them of the highest value. As a fruit region, probably no section of the states can furnish equally good soil and climate for the growth in perfection of all hardy fruits, as may be found for sixty miles each way, east and west of Cleveland, embracing a strip of about five miles in width. Eminent cultivators in the southern portion of Ohio, acquainted with the country, accord the belief that at a no very distant day, will the markets of Cincinnati and other places in that section, be supplied with fruits from northern Ohio. In nothing but Grapes does the southern portion of the State attempt rivalry with the northern. The influence of the waters of Lake Erie, render the section of country immediately bordering upon its southern shore, far less subject to injury from frost upon fruit buds and blossoms, than any other portion of country within our knowledge.

The following are descriptions of new seedling Apples, that are counted as worthy a place, among a collection deemed desirable; and far more estimable than such fruits as the Alexander, Black Gilliflower, and many others, of a like class.

THE BRACKEN APPLE.—The account of history and description of this Apple was sent me by S. A. BARKER, Esq., of McConnelsville. From its early season of ripening, I am under the impression it will, ere long, be in general demand for orchard

culture. Mr. BARKER, in giving the description, &c., says: "A medium sized specimen now before me, measures two and a half inches from calyx to stem, and three inches in diameter; many of the apples are one-third larger. They are partially ribbed, and many of them have deep irregular depressions in their sides. Stem short, not exceeding half an inch in length, and set in rather a deep and contracted basin, and generally terminates from a fourth, to half an inch below the surrounding flesh. Calyx small, and set in a shallow contracted cavity, but does not project beyond the surrounding parts; color light green, dotted with a few brown specks, which appear to be external, with numerous specks of darker green in the skin. When fully ripe the color is a greenish yellow, with the brown and green specks, before mentioned, still remaining on and in the skin. Taste, slightly acid."

I find the *outline* of the specimen before me, to correspond pretty nearly, with DOWNING'S, of the Vandevere. The stem however is thicker and shorter, and the calyx more regular. The tree is of rapid growth, and attains large size. The apple is suitable for cooking about the middle of June, and ripens from the 25th of June, to 15th of July, being in advance of all other apples cultivated here, for culinary purposes, and as early as any other in ripening.

History.—JUDGE BARKER, of Washington county, informs me that WM. PITT PUTNAM, Esq., of Belpre, discovered this apple in an orchard of seedling trees, in Bracken county, Ky., and introduced it from thence to his orchard and nursery.

PHILLIPS SWEETING.—This is a fruit of which we received specimens from our friend JAS. MATHEWS, Esq., of Coshocton. It is from an orchard of seedling trees planted by GEORGE PHILLIPS in Coshocton county, thirty-four years since. The fruit is larger and more showy in appearance, than that of any winter sweet apple we know.* And in market would probably command a higher price per bushel.

DESCRIPTION.—Fruit medium to large, roundish, somewhat flattened, a little angular. Skin clear red and yellow; blotched or mottled, the red prevailing and deepened, with small light specks upon the side exposed to the sun. Stalk, medium size, planted in an open, deep, and regular cavity, and projecting even with the surrounding surface; cavity slightly russeted. Calyx set in a broad, open, but deep basin. Flesh, rich yellow, tender, juicy and crisp, with a rich agreeable sweet flavor. Ripens from November to February.

I have now upon my table before me some fifty seedling fruits, collected from different sections of the state, many of them valueless, and very few of sufficient good qualities, to render them of value beyond the locality of their origin.

We have of the "Rambo" apple, apparently three different fruits, bearing the name. Each present characters so strong, that they are readily distinguished; and yet when placed together, there

* More showy than the *Ladies' Sweeting*, but we do not think it equal in delicacy, or of as high flavor, but surpasses that of any other variety.

is a marked difference. I ascribe it to climate and soil. Very respectfully, F. R. ELLIOTT. *Cleveland, Ohio, Dec. 20, 1846.*

POMOLOGICAL NOTES.—MR. EDITOR—Will you give me a little space in the columns of the *Horticulturist* to make a few remarks on some foreign varieties of the apple; and I will commence by saying that many varieties of European fruits, are so imperfectly described in the books, that it is often a very difficult matter to determine whether or not, they are true to name. Our climate, our hot, dry, burning sun, has such an effect on many sorts of fruit, that the color, and the general appearance of the fruit is altogether different from that laid down in European publications. And I am also quite of the opinion, that American authors and nurserymen are but too much inclined to follow descriptions given by European writers. Again, another great difficulty seems to be among ourselves, in selecting the largest, fairest, and most beautiful specimens, as a criterion, which often bear but little resemblance to the great mass of fruit on the tree.

The *Blenheim Pippin*, *Kirke's Lord Nelson*, *Brabant Bellefleur*, *Court Pendre Plat*, *Cornish Gilliflower*, and several others, have at various times been condemned by myself and others, as not true to name, yet afterwards have been convinced that they were true.

"*Blenheim Pippin*, a large and showy English apple. Fruit, very large, roundish, three inches in diameter at the base. Skin yellowish, becoming deep orange, stained on the sunny side with dull and dark red stripes." Perhaps you will recollect our conversation about this apple, last September, when I had the pleasure of spending a few hours with you, in looking over your beautiful grounds. I then informed you that I received this variety from JUDGE BUEL in 1836: and that it proved false to name. That last year I received it from your own grounds. The same season one of the seasons produced two apples, which proved to be precisely like those I received from JUDGE BUEL. You informed me that you had procured this variety directly from the *London Hort. Society*, and requested I would give it a further trial. Among the large number of the varieties of the apple which I had just exhibited at the State Fair held at Auburn, were these apples. All who examined them there, pronounced them false to name. I was almost ashamed of them; but I exhibited them pretty much for the same purpose that my friend ALLEN used to exhibit pictures of the Land-pikes and Alligators, beside his fine Berkshires; merely to show the contrast. On my return home in the month of October, I again, with book in hand, examined the fruit on the tree. "Fruit very large," (no; small.) "Roundish," (no; conical, and skin yellowish-white nearly covered with red.) "Flesh very sweet." I again condemned it. Soon after I discovered in the nursery a tree with two apples, one of which was large and beautiful, and answered the description in every particular, only it was somewhat more red. I am now convinced that it is true to name. But it is

not worth cultivating except for feeding stock. Its peculiar sweetness, and withal, its very productiveness, may in some sections of the country render it an object for that purpose.*

Brabant Bellefleur.—I received this from JUDGE BUEL; and a most superior fruit it is too. Fruit very large, roundish, but can hardly be called "oblong." Skin pale yellow, but instead of slightly striped with red, it is generally nearly covered with red, and in exposed situations often with a fine bloom on the sunny side; the whole being covered with numerous dark specks. Flesh firm, crisp, very juicy, rich and high flavored; rather acid than sub-acid. A fine winter variety well-worthy of extensive cultivation. The tree is inclined to grow every way rather than upright; however it makes fine strong shoots, and not often very crooked. It requires to be worked on stocks 4 or 5 feet high, or tied up to a strong stake, until broke of its bad habits.

Kirke's Lord Nelson, another very large apple, but in some respects not well described. The skin is rather green than yellow; rather striped, than covered with red. An abundant bearer; a rampant grower. Fruit fair, but not superior.

Sack and Sugar, another foreign variety, which is as destitute of sugar as a vinegar barrel. Worse than worthless.

Green Everlasting.—Famous for long keeping; and proof against unruly boys stealing them. At all events they *never will steal them but once*. The tree is a fine grower, and this is the only good quality which either the tree or fruit possesses.

Let not my motives in making the foregoing remarks, be misconstrued. I do it not in a spirit of fault-finding; far from it. Our works on Horticulture are in all respects quite equal, if not superior, to that of any other nation. But should my remarks induce fruit growers to be more careful, and less hasty in condemning, before they give each variety of fruit a fair trial and a careful examination, my object will be attained. *B. Hodge. Buffalo Nursery, Jan., 1847.*

P. S.—In noticing, in the *Horticulturist*, some strictures on Prince's Manual of Roses, I would suggest whether some standard ought not to be adopted among horticulturists and nurserymen, how far one person may with propriety trespass on the rights of others, in assuming their publications as their own.

I am the more inclined to make this inquiry, from the fact, that a brother nurseryman has,

* There is a pomological fact regarding apples, which we have been aware of some time, which Col. HODGE's remarks illustrate, and which all our readers may not know. The first and second crops of a young apple tree, in many sorts, seldom attain the true character of the fruit. We have frequently seen fruit on young trees, bearing the first two or three specimens, which we could not identify, though the next crop would all take the normal form. A little more time must be given, therefore, in testing the apple than other fruit. Col. H. is correct in saying the *Blenheim Pippin* is of little value here. The truth is the apples of this country are so superior to European varieties, that we predict, in ten years, more than four-fifths of all the latter that have been introduced and proved, will be abandoned as far inferior to native varieties.—Ed.

during the past year, published a Catalogue, wherein more than five-sixths of the whole work has been taken from a catalogue published by me; not merely the substance, but he has copied word after word, sentence after sentence, and page after page. Notes and remarks on fruits, ornamental trees, shrubs, &c., together with most of the preface, merely altering it for a different latitude. In a word, it is but little more than a duplicate of my Catalogue of 1844-5. No credit or intimation was given, that any part of it was taken from any other Catalogue. The gentleman has since assured me that he was not aware that he was doing any thing wrong or improper. Common courtesy, if nothing else, would seem to require that, where extracts are made from other publications, due credit should be given. B. H.

CLOTH OF GOLD ROSE—Several items have appeared, regarding the habits of this new yellow Rose. Now I suspect that the CLOTH OF GOLD ROSE, needs size and age to be a free bloomer, and to realize all our expectations about it. I have seen a plant (one of the first imported, I believe) in one of the green houses of the President of the Mass. Horticultural Society, which is very large, being

trained under the glass, so as to cover, perhaps, 20 feet. This rose, Mr. WILDER tells me, blooms profusely in the winter and spring, and indeed, is loaded with flowers. It is spur-trimmed, just like a grape vine, and in its season, is a beautiful sight. Yours, J. B. C. Boston.

Our thanks are very heartily tendered to the GENESEE VALLEY HORTICULTURAL SOCIETY, of New-York, and the STEUBENVILLE HORTICULTURAL SOCIETY, of Ohio, for the distinction they have recently conferred upon us, by electing us among their honorary members.—ED.

ERRATA.—Several typographical errors occurred in the last number, which the reader is requested to correct.

On page 319, "to get into goal," should be "to get into gaol."

Page 323, for "MR. KILLMAN," read "*Mr. Killmar.*"

Page 331, in MISS BREMER'S letter, for "the sum of intellectual life," read the "*sun,*" &c.

Page 344, for "economical and mental purposes," read "economical and *ornamental* purposes."

MASSACHUSETTS HORTICULTURAL SOCIETY.

The Society held a stated meeting, Saturday, Jan. 2, 1847—President WILDER in the chair.

Parker Barnes having declined to act upon the flower committee, Wm. B. Richards was appointed to fill the vacancy.

Cheever Newhall, as Chairman of the Finance Committee, reported the state of the treasury, Dec. 31, 1846, as follows:

<i>Receipts from April 1 to Dec. 31, 1846.</i>	
Balance in Treasury, April 1.....	\$10 27
Donation for special premiums.....	300 00
Rent of store.....	750 00
Rent of hall.....	400 00
Rec'd for tickets of admission.....	790 07
" admission fees and assessments.....	1056 00
" interest on Lyman Fund.....	40 00

\$3346 34

<i>Expenditures from April 1 to Dec. 31, 1846.</i>	
Paid premiums.....	\$1612 00
" Door Keeper and care of hall.....	256 60
" Fixtures of hall.....	208 05
" Gas.....	17 60
" Diplomas.....	40 50
" Interest on loan.....	750 00
" Taxes.....	90 00
" Library department.....	51 18
" Printing.....	25 67
" Salary of Treasurer and Secretary.....	100 00
" Two vases.....	95 00
" Medals from London Hort. Society.....	20 94
" One large iron safe.....	109 36
" Premium for stock on investing the Lyman Fund.....	50 00
" incidental expenses at anniversary and other times during the year.....	181 00
" Miscellaneous expenses.....	218 56
" Balance in hands of Treasurer, Dec. 31, 1846.....	59 58

\$3316 34

Also, in conformity to a provision in the By-Laws of the Society, the Committee on Finance submit the following account of the property of the Association, viz.:

Horticultural Hall in School st. valued at.....	\$36,000
Three chandeliers in said Hall.....	390
Two marble vases.....	95
Two elegant china vases, the gift of Josiah Bradley, Esq.....	150
A large quantity of glass and other wares used to exhibit fruits and flowers.....	900
Library of the Society consisting of about 300 volumes, some of which are rare and costly.....	1,200
Furniture of the Library room and safe.....	300
Appleton Fund, invested in the Mass. Hospital Life Insurance Company.....	1,000
Lowell Fund, invested in said Company.....	1,000
Lyman Fund, invested in shares of the Shoe and Leather Dealers' Bank.....	1,000

\$42,035

The only debt of the Society known to the Committee, is a note secured by mortgage on their real estate, for *Fifteen Thousand Dollars*, dated May 18, 1844, payable in five years, with interest at the rate of five per cent. per annum, payable half-yearly. For the Finance Committee.

CHEEVER NEWHALL, Chairman.

Boston, January 2, 1847.

Voted, That the report of the Finance Committee be accepted and placed with the transactions of the last year.

Mr. Samuel Walker offered the following resolution:

Whereas EBENEZER WIGHT, Esq., has discharged the duties of Recording Secretary, with

assiduity and untiring zeal, and until the present season without compensation or reward; therefore

Voted, That the thanks of the Society be presented to our late Recording Secretary, EBENEZER WIGHT, Esq., for his valuable services; and also

Voted, That a committee of three be appointed by the Chair, to purchase a gold pen, a gold pencil case and an ornamental inkstand, or any other article more acceptable to Mr. Wight, in value not exceeding fifty dollars, and have a suitable inscription engraved thereon, and present the same, in behalf of the Society, to our esteemed member, EBENEZER WIGHT, Esq., our late Recording Secretary.

Messrs. Samuel Walker, E. M. Richards and C. M. Hovey were appointed a Committee to carry the above resolutions into effect.

Communications were received from the American Agricultural Association, and

Voted, The thanks of the Society to the American Agricultural Association.

An amendment to the 20th section of the By-Laws was proposed by Samuel Walker, as follows, viz: To strike out all after the word "them," in the 22d line from the top, to the end of said section, being the last line in page 9 of our present edition of the By-Laws.

Voted, That the foregoing amendment be entered on the Journal, to be acted upon at the stated meeting of the Society in April next.

A communication was received and read from SAMUEL BROOKS, Esq. of Chicago, Illinois; and it was voted that it be referred to the Corresponding Secretary to answer.

The following list of gentlemen was then proposed by the Executive Committee, for honorary and corresponding membership, viz:

Honorary—Baron Justus Liebig, Giessen.

Dr. Lindley, London.

Hon. Theodore Frelinghuysen, New York.

Col. Thomas H. Perkins, Brooklyn.

J. P. Cushing, Esq., Watertown.

Judge Davis.

Josiah Bradley, Esq.

Stephen H. Smith, Esq. and

Dr. Munson.

Corresponding—Professor Asa Gray, Cambridge;

Edmund Beck, Esq., Worton Coll. Isleworth, near London;

C. McIntosh, Esq., Dalkeith Palace, near Edinburgh;

Joseph Paxton, Esq., Chatsworth, England;

R. Glendenning, Esq., Chiswick, near London;

E. N. Horsford, Albany;

Henry Colman, Esq.;

Rev. Henry W. Beecher, Editor Western Farmer and Gardener, Indiana;

A. B. Allen, Esq., Editor American Agriculturist, New York;

Luther Tucker, Esq., Editor Cultivator, Albany;

Thomas Rivers, Esq., Sawbridgeworth, Eng.;

Monsieur Laffay, Bellevue, near Paris, France;

R. Buist, Esq., Philadelphia;

J. B. Russell, Esq., Cincinnati, Ohio;

Dr. H. D. Brinkle, Philadelphia;

Capt. James P. Gerry, U. S. Navy;

Hon. George Lunt, Newburyport;

and the above named gentlemen were elected unanimously.

EDWARD C. R. WALKER, Rec. Secretary.

The Society held an adjourned meeting Saturday,

January 9, 1847. President WILDER in the Chair.

The following resolution was offered by the Executive Committee:

Whereas, the Committee for establishing premiums have submitted a list to the Executive Committee, not in accordance, in some respects, with the appropriation; and whereas, the offering of premiums for *large designs*, such as temples, pagodas and the like, is decreed not to be in good taste, and calculated to encourage the skill of the architect rather than that of the florist; therefore,

Voted, That in conformity with a desire expressed by the committee for establishing premiums, the particular appropriation for designs and decorating, be dispensed with, and that the following apportionment to the respective departments be made instead of that ordered by the vote on the 26th Dec. last.

For Special Prize,.....	\$100
" Fruits,	450
" Decorations,.....	650
" Vegetables,	150
	<hr/>
	\$1,350

Voted, That the foregoing resolution be accepted.

The Committee appointed to examine the accounts of the Mount Auburn Cemetery, reported that they had attended to that duty, and have received of GEO. W. BOND, Esq., Treasurer of said Association, the sum of three thousand two hundred and thirty-three dollars and forty-one cents, being the Society's proportion of the nett receipts for the year ending Dec. 31, 1846.

The Committee also report that they have paid this sum into the treasury.

Voted, That the foregoing report be accepted and placed upon the records.

The Executive Committee reported verbally, that they had renewedly made claim for the Society's proportion of the amount received for private interments at Mount Auburn.

Voted, That a committee of three be appointed, at large, to nominate thirteen persons to act as a Committee of Arrangements to superintend the annual exhibition, and Messrs. David Haggerston, Otis Johnson and Samuel Walker were appointed that committee.

Voted, That the Lowell medals shall correspond in size and value with the Appleton medals, and that the committee on medals be and hereby are authorized and instructed to procure suitable dies for this purpose.

On motion of Mr. Cheever Newhall, it was

Voted, That a sum, not exceeding \$300, or any money in the Treasury not otherwise appropriated, be placed at the disposal of the Library Committee for the increase of the Library, and that said committee report a list of such books as they recommend to the Society for approval.

Voted, To place in the hands of the Library Committee the sum of fifty dollars to be appropriated for the salary of the Librarian.

On motion of Mr. Cheever Newhall,

Voted, That the Committee of Finance be instructed to invest \$2,500 of the amount received

the present year from the Treasurer of Mount Auburn, in stock at their discretion, and that it be held and specially applied to the payment of the

debt of the Society which becomes due and payable in May, 1849.

E. C. R. WALKER,
Recording Secretary.

PENNSYLVANIA HORTICULTURAL SOCIETY.

The stated meeting of this Society was held as usual on Tuesday evening, January 19, 1847,—the President in the chair.

Another severely cold evening affected the display and attendance. There were shown one small collection of plants in pots; two beautiful baskets of Flowers, and two handsome Bouquets. Of vegetables there were two extensive collections; a dish of Tomatoes, and another of Mushrooms. A number of varieties of Apples were presented by a member, which he had received from General Wade of Cincinnati.

Premiums awarded on this occasion, were as follows, viz:

For a display of plants in pots and glasses, a special premium of one dollar to Peter Raabe. For the best Bouquet, to James Bisset, gardener to J. Dundas; for the next best Bouquet, to Andrew Dryburgh. A special premium of three dollars, for a basket Bouquet, to Peter Raabe; another of two dollars, for a basket, to Wm. Hall, gardener to Caleb Cope.

The committee for awarding premiums on fruit expressed their satisfaction in noticing the display of Apples, raised by General Wade, of Cincinnati, sent by him to Dr. Brinkle, of the following varieties: Esopus Spitzenberg, Lady Apple, Black Gilliflower, Surprise, Ladies' Sweeting, Pippin, Unknown, and another variety, which would not keep, was also sent. The first two varieties were equal to any specimens that have come under the notice of the committee; with the others they were not familiar, but the specimens exhibited were very fine.

The committee on vegetables awarded the premiums for the most interesting, and the next most interesting displays, to Anthony Felten; and special premiums of one dollar each, for a fine display of Tomatoes, to Benjamin Gulliss, gardener to Jacob Snider, Jr.; and for two dishes of Mushrooms, to Archibald Henderson, gardener to Wharton Chancellor.

The unfinished business of last meeting, being the consideration of the schedule of premiums for the ensuing year. Various amendments were proposed, when the whole subject was ordered to be referred to a select committee of ten, for revision and report to an adjourned stated meeting, to be held on the 28th instant.

The committee consists of Thomas Hancock, Dr. Wm. D. Brinkle, James Ritchie, James Remington, Wm. Chalmers, Dr. Thomas McEuen, George Zantzing, James Bisset, Andrew Dryburgh, and John Sherwood.

The president announced the appointment of the following committees for the ensuing year:—

Committee for establishing the names of Fruits: Dr. Wm. D. Brinkle, Thomas Hancock, E. W. Keyser, James D. Fulton, and Dr. Thos. McEuen.

Committee for establishing Premiums: Thomas Hancock, Dr. Wm. D. Brinkle, James Ritchie, James Remington, and William Chalmers.

Committee on Finance: Isaac Elliott, A. R. Chambers and Jno. R. Brinkle.

Committee for the distribution of Seeds, etc.: Thos. C. Percival, J. Snider, Jr. and J. Rutherford, Jr.

Committee on new Plants, Flowers, Fruits and Vegetables: John B. Smith, Dr. James H. Bradford, Thomas P. James, Dr. A. L. Ellwyn, and A. L. Kennedy.

Library Committee: Robert Buist, Thos P. James, Peter K. Gorgas, Dr. Thos. McEuen, and Wm. McGuigan.

Committee to superintend Exhibitions: Wm. Chalmers, *Chairman.* William Ashbridge, Isaac B. Baxter, James Bisset, H. B. Blanchard, Dr. Wm. D. Brinkle, Robert Burwell, Alexander Caie, George B. Deacon, John Dick, Wm. H. Dillingham, Henry A. Dreer, Richard Felters, Peter K. Gorgas, William Johns. W. F. Jones, E. W. Keyser, R. Kilvington, Nathaniel Knowles, P. Mackenzie, Dr. Thomas McEuen, E. Meredith, J. E. Mitchell, Thomas C. Percival, Richard Price, Peter Raabe, John Rutherford, Jr., S. R. Simmons, W. Sinton, C. S. Smith, Wm. S. Vaux, Dr. G. Watson, and G. Zantzing.

Members elected: John O. Hughes, Florist, Trenton, N. J.; Dr. Thomas B. Wilson, Newark, Del. and S. Austin Allibone.

The annual meeting of the Society was held on January 19, 1847—

On motion, Mr. W. H. Dillingham, was called to the chair, and Charles Stephen Smith, appointed Secretary.

The chair appointed Messrs. Zantzing and Meredith tellers, who reported, after the balloting, that the following named gentlemen were duly elected officers:

President: Caleb Cope.

Vice-Presidents: General R. Patterson, David Landreth, James Dundas, and Joshua Longstreth.

Treasurer: John Thomas.

Corresponding Secretary: Thomas C. Percival.

Recording Secretary: Thomas P. James.

Which result was announced by the chairman, and those gentlemen declared duly elected.

THOMAS P. JAMES, *Rec. Sec'y.*

THE

Horticulturist

AND

JOURNAL OF RURAL ART AND RURAL TASTE.

VOL. I.

MARCH, 1847.

No. 9.

"THE MAN WHO LOVES NOT TREES, to look at them, to lie under them, to climb up them, (once more a schoolboy) would make no bones of murdering Mrs. Jeffs. In what one imaginable attribute, that it ought to possess, is a tree, pray, deficient? Light, shade, shelter, coolness, freshness, music,—all the colors of the rainbow, dew and dreams dropping through their soft twilight, at eve and morn,—dropping direct, soft, sweet, soothing, restorative from heaven. Without trees, how, in the name of wonder, could we have had houses, ships, bridges, easy chairs, or coffins, or almost any single one of the necessities, comforts, or conveniences of life? Without trees, one man might have been born with a silver spoon in his mouth, but not another with a wooden ladle."

Every man, who has in his nature a spark of sympathy with the good and beautiful, must involuntarily respond to this rhapsody of CHRISTOPHER NORTH's, in behalf of trees—the noblest and proudest drapery that sets off the figure of our fair planet. Every man's better sentiments would involuntarily lead him to cherish, respect, and admire trees. And no one who has sense enough rightly to understand the wonderful system of life, order, and harmony, that is involved

in one of our grand and majestic forest trees, could ever destroy it, unnecessarily, without a painful feeling, we should say, akin at least to murder in the fourth degree.

Yet it must be confessed, that it is surprising, when, from the force of circumstances, what the phrenologists call the principle of *destructiveness*, gets excited, how sadly men's better feelings are warped and smothered. Thus, old soldiers sweep away ranks of men with as little compunction as the mower swings his harmless scythe in a meadow; and settlers, pioneers, and squatters, girdle and make a *clearing*, in a centennial forest, perhaps one of the grandest that ever God planted, with no more remorse than we have in brushing away dusty cobwebs. We are not now about to declaim against war, as a member of the peace society, or against planting colonies and extending the human family, as would a disciple of Dr. Malthus. These are probably both wise means of progress, in the hands of the Great Worker.

But it is properly our business to bring men back to their better feelings, when the fever of destruction is over. If our ancestors found it wise and necessary to cut down vast forests, it is all the more needful

that their descendants should plant trees. We shall do our part, therefore, towards awakening again, that natural love of trees, which this long warfare against them—this continual laying the axe at their roots—so common in a new country, has, in so many places, well nigh extinguished. We ought not to cease, till every man feels it to be one of his moral duties to become a planter of trees; until every one feels, indeed, that, if it is the most patriotic thing that can be done to make the earth yield two blades of grass instead of one, it is far more so to cause trees to grow where no foliage has waved and fluttered before—trees, which are not only full of usefulness and beauty always, but to which old Time himself grants longer leases than he does to ourselves, so that he who plants them wisely, is more *certain* of receiving the thanks of posterity, than the most persuasive orator, or the most prolific writer of his day and generation.

The especial theme of our lamentation touching trees, at the present moment, is the general neglect and inattention to their many charms, in country towns and villages. We say *general*, for our mind dwells with unfeigned delight upon exceptions—many beautiful towns and villages in New England, where the verdure of the loveliest elms waves like grand lines of giant and graceful plumes above the house tops, giving an air of rural beauty, that speaks louder for the good habits of inhabitants, than the pleasant sound of an hundred church bells. We remember Northampton, Springfield, New Haven, Stockbridge, and others, whose long and pleasant avenues are refreshing and beautiful to look upon. We do not forget that large and sylvan park, with undulating surface, the Boston Common, or that really admirable city *arboretum* of rare trees, Wash-

ington Square of Philadelphia.* Their groves are as beloved and sacred in our eyes, as those of the *Deo-dar* are to the devout Brahmins.

But these are, we are sorry to be obliged to say, only the exceptions to the average condition of our country towns. As an offset to them, how many towns, how many villages, could we name, where rude and uncouth streets bask in the summer heat, and revel in the noontide glare, with scarcely a leaf to shelter or break the painful monotony? Towns and villages, where there is no lack of trade, no apparent want of means, where houses are yearly built, and children weekly born, but where you might imagine from their barrenness, that the soil had been cursed, and it refused to support the life of a single tree.

What must be done in such cases? There must be at least one right-feeling man in every such Sodom. Let him set vigorously at work, and if he cannot induce his neighbors to join him, he must not be disheartened—let him plant and cherish carefully a few trees, if only half a dozen. They must be such as will grow vigorously, and like the native elm, soon make themselves felt and seen wherever they may be placed. In a very few years they will preach more eloquent orations than “gray goose quills” can write. Their luxuriant leafy arms, swaying and waving to and fro, will make more convincing gestures than any member of congress or stump speaker, and if there is any love of nature dormant in the dusty hearts of the villagers, we prophecy that in a very short time there will be such a general yearning after green trees, that the whole place will become a bower of freshness and verdure.

* Which probably contains more well grown specimens of different species of forest trees, than any similar space of ground in America.

In some parts of Germany, the government makes it a duty for every landholder to plant trees in the highways, before his property; and in a few towns that we have heard of, no young bachelor can take a wife till he has planted a tree. We have not a word to say against either of these regulations. But Americans, it must be confessed, do not like to be over-governed, or compelled into doing even beautiful things. We therefore recommend, as an example to all country towns, that most praise-worthy and successful mode of achieving this result, adopted by the citizens of Northampton, Massachusetts.

This, as we learn, is no less than an *Ornamental Tree Society*. An association, whose business and pleasure it is to turn dusty lanes and bald highways into alleys and avenues of coolness and verdure. Making a "wilderness blossom like the rose," is scarcely more of a rural miracle than may be wrought by this simple means. It is quite incredible how much spirit such a society, composed at first, of a few really zealous *arboriculturists*, may beget in a country neighborhood. Some men there are, in every such place, who are too much occupied, with what they consider more important matters, ever to plant a single tree, unsolicited. But these are readily acted upon by a society, who work for "the public good," and who move an individual of this kind, much as a town meeting moves him, by the greater weight of numbers. Others there are, who can only be led into tasteful improvement, by the principle of *imitation*, and who consequently will not begin to plant trees, till it is the fashion to do so. And again, others who grudge the trifling cost of putting out a shade tree, but who will be shamed into it, by the example of every neighbor around them—neighbors who have

been stimulated into action by the zeal of the society. And last of all, as we have learned, there is here and there, an instance of some slovenly and dogged farmer, who positively refuses to take the trouble to plant a single twig by the road-side. Such an individual, the society commiserate, and beg him to let them plant the trees in front of his estate, at their own cost!

In this way, little by little, the *Ornamental Tree Society* accomplishes its ends. In a few years it has the satisfaction of seeing its village the pride of the citizens—for even those who were the most tardy to catch the planting fever, are at last—such is the silent and irresistible influence of sylvan beauty—the loudest champions of green trees—and the delight of all travellers, who treasure it up in their hearts, as one does a picture drawn by poets, and colored by the light of some divine genius.

We heartily commend, therefore, this plan of *Social Planting Reform*, to every desolate, leafless, and repulsive town and village in the country. There can scarcely be one, where there are not *three* persons of taste and spirit enough to organize such a society; and once fairly in operation, its members will never cease to congratulate themselves on the beauty and comfort they have produced. Every tree which they plant, and which grows up in after years into a giant trunk and grand canopy of foliage, will be a better monument (though it may bear no lying inscription) than many an unmeaning obelisk of marble or granite.

Let us add a few words respecting the best trees for adorning the streets of rural towns and villages. With the great number and variety of fine trees which flourish in this country, there is abundant reason for asking, "where shall we choose?" And although we must not allow ourselves

space at this moment, to dwell upon the subject in detail, we may venture two or three hints about it.

Nothing appears to be so captivating to the mass of human beings, as *novelty*. And there is a fashion in trees, which sometimes has a sway no less rigorous than that of a Parisian *modiste*. Hence, while we have the finest indigenous, ornamental trees in the world, growing in our native forests, it is not an unusual thing to see them blindly overlooked for foreign species, that have not half the real charms, and not a tenth part of the adaptation to our soil and climate.

Thirty years ago, there was a general *Lombardy poplar epidemic*. This tall and formal tree, striking and admirable enough, if very sparingly introduced in landscape planting, is, of all others, most abominable, in its serried stiffness and monotony, when planted in avenues, or straight lines. Yet nine-tenths of all the ornamental planting of that period, was made up of this now decrepid and condemned tree.

So too, we recall one or two of our villages, where the soil would have produced any of our finest forest trees, yet where the only trees thought worthy of attention by the inhabitants, are the *Ailanthus* and the Paper Mulberry.

The principle which would govern us, if we were planting the streets of rural towns, is this: *Select the finest indigenous tree or trees; such as the soil and climate of the place will bring to the highest perfection.* Thus, if it were a neighborhood where the Elm flourished peculiarly well, or the Maple, or the Beech, we would directly adopt the tree indicated. We would then, in time, succeed in producing the finest possible specimens of the species selected: while, if we adopted, for the sake of fashion or novelty,

a foreign tree, we should probably only succeed in getting poor and meagre specimens.

It is because this principle has been, perhaps accidentally, pursued, that the villages of New-England are so celebrated for their sylvan charms. The Elm is, we think, nowhere seen in more majesty, greater luxuriance, or richer beauty, than in the valley of the Connecticut; and it is because the soil is so truly congenial to it, that the elm-adorned streets of the villages there, elicit so much admiration. They are not only well planted with trees—but with a kind of tree which attains its greatest perfection there. Who can forget the fine lines of the Sugar Maple, in Stockbridge, Massachusetts? They are in our eyes the rural glory of the place. The soil there is their own, and they have attained a beautiful symmetry and development. Yet if, instead of maples, poplars or willows had been planted, how marked would have been the difference of effect.

There are no grander or more superb trees, than our American Oaks. Those who know them only as they grow in the midst, or on the skirts of a thick forest, have no proper notion of their dignity and beauty, when planted and grown in an avenue, or where they have full space to develop. Now, there are many districts where the native luxuriance of the oak woods, points out the perfect adaptation of the soil for this tree. If we mistake not, such is the case where that charming rural town in this state, Canandaigua, stands. Yet, we confess we were not a little pained, in walking through the streets of Canandaigua, the past season, to find them mainly lined with that comparatively meagre tree, the Locust. How much finer and more imposing, for the long principal street of Canandaigua, would be an avenue of our finest and hardiest native

oaks—rich in foliage and grand in every part of their trunks and branches.*

Though we think our native weeping Elm, our Sugar Maple, and two or three of our Oaks, the finest of street trees for country villages, yet there are a great many others which may be adopted, when the soil is their own, with the happiest effect. What could well be more beautiful, for example, for a village with a deep mellow soil, than a long avenue of that tall and most elegant tree the Tulip-tree or Whitewood? For a village in a mountainous district, like New-Lebanon, in this State, we would perhaps choose the White Pine, which would produce a grand and striking effect. In Ohio, the Cucumber-tree would make one of the noblest and most admirable avenues, and at the south what could be conceived more captivating than a village whose streets were lined with rows of the *Magnolia grandiflora*? We know how little common minds appreciate these natural treasures; how much the less because they are common in the woods about them. Still, such are the trees which should be planted; for fine forest trees are fast disappearing, and planted trees, grown in a soil fully congenial to them, will, as we have already said, assume a character of beauty and grandeur that will arrest the attention and elicit the admiration of every traveller.

The variety of trees for cities—densely crowded cities—is but small; and this, chiefly, because the warm brick walls are such hiding places and nurseries for insects, that many fine trees—fine for the country and for rural towns—become absolute pests in the cities. Thus, in Philadelphia, we have seen, with regret, whole rows of the European Linden cut down within the last ten years, because this tree, in cities, is so infested with odious worms that it often becomes unendurable. On this account that foreign tree, the *Ailanthus*, the strong scented foliage of which no insect will attack, is every day becoming a greater metropolitan favorite. The Maples are among the thriftiest and most acceptable trees for large cities, and no one of them is more vigorous, cleaner, hardier, or more graceful than the Silver Maple, (*Acer eriocarpum*.)

We must defer any further remarks for the present; but we must add, in conclusion, that the planting season is at hand. Let every man, whose soul is not a desert, plant trees; and that not alone for himself—within the bounds of his own demesne, but in the streets, and along the rural highways of his neighborhood. Thus he will not only lend grace and beauty to the neighborhood and county in which he lives, but earn, honestly, and well, the thanks of his fellow men.

AMERICAN VINEYARDS.

BY WILLIAM R. PRINCE, FLUSHING, L. I.

It seems a matter of amazement that so much apathy should exist in regard to the Vine culture, when other objects of both

horticultural and agricultural interest are exciting such marked attention, and when we have thousands of acres of idle lands that might be most lucratively devoted to the production of an article for which we are paying an annual tribute of millions to for-

* The Oak is easily transplanted from the nurseries—though not from the woods, unless in the latter case, it has been prepared a year beforehand, by shortening the roots and branches.

eign nations less favorably situated than ourselves. The God of nature placed no edible species of the Grape in Europe, and the varieties of the Persian species, (*Vitis vinifera*) when first introduced to France, could scarcely sustain the winters of her Mediterranean shores. Gradually, however, the Vine has become acclimated throughout that country, and we now see flourishing vineyards every where on the shores of the Rhine, and even extending much farther to the north. All the numerous varieties of the Grape, which comprise the diversified vineyards of Europe and Asia, are the seminal productions of a single original species, which was the only one nature bestowed on the Eastern hemisphere.

Turning to our country, we find that our bounteous Benefactor planted on our soil *six edible species* of the grape, with hundreds of native varieties, scattered through our forests from Maine to Texas. Many of these varieties are highly estimable as table fruit, and all are susceptible of making wine, and with the exception of some few varieties of the Fox Grape, all are well adapted for that purpose, and the different varieties of the *Vitis æstivalis*, and of the Scuppernong (*Vitis vulpina*) are pre-eminently so. It is also a remarkable fact that 2000 gallons of wine per acre have been produced in various sections of our country, when one-third of that quantity would be deemed an enormous yield in Europe. The cause is obvious, and is plainly attributable to the intensity of the summer's heat throughout our land. In France, and the more northern parts of Europe, the Grape vine is cultivated as a small shrub, this peculiar mode of culture being rendered necessary to counteract the inappropriateness of climate to an exotic brought from a much warmer climate; and the necessary adoption of this course renders

the crop diminutive, when contrasted with the product, which a more congenial climate would afford. But an active movement has recently taken place, both in France and Germany, to counteract this evil, by the introduction of the hardy varieties of the Grape from America, and by producing seminal hybrids of a similar robust character. We already see the Isabella, Alexander, and Catawba Grapes, announced in their publications, as estimable varieties, and as imparting to their wines "*un gout particulier*;" and we find enumerated in their nursery catalogues, fourteen varieties of American Grapes.

Three years ago, the Margrave of Baden formed a vineyard composed of above twenty varieties of American Grapes, which he obtained from our nurseries, and recently, Mr. Vibert, an eminent writer on the Vine Culture, has translated and re-published at Paris, the "Treatise on the Vine," written by myself in 1830. The vigor of this new race of the Vine, is commented upon with astonishment by their writers, and they no longer deem it a fable, that some American vines spread over a quarter of an acre in Carolina, and that they may be extended equally in other localities.

Here, partaking, as it were, of the general character of our country, the Vine extends its tendrils far and wide, impatient of restraint; whilst nurtured and warmed by the richness of our soil and the glowing rays of a bright and unimpeded sunshine, it presents to the mind in its wide expansion and ample development, another emblem of the genius of our country. It has been remarked by highly intelligent observers, that the growth of trees in North America when contrasted with Europe is as 5 to 3; but this is intended to apply to the natural productions of both continents, and it may be ap-

plied with far greater force to such exotics as have been introduced there from warmer and more congenial climes, as is the case with the Persian Grape.

Where stand my countrymen? Why, let me ask, should their industry be latent in this one pursuit of the Vine culture, whilst the prairies are becoming surcharged with grain, the cotton fields annually extending their area, and the bosom of the earth torn asunder to unveil her mineral riches?

True independence consists in the production from our own soil, of every article necessary for the sustenance and comfort of man. Why then should we pay tribute for that which our country is so pre-eminently calculated to afford us, and which has been marked out by the Deity as one of her natural productions? We already witness the success of numerous vineyards in Virginia, North and South Carolina, and Georgia, and the successful efforts of NICHOLAS LONGWORTH of Cincinnati, a man entitled to the highest honors, in the establishment of extensive vineyards in that vicinity, which already comprise 200 acres. Every where around us we see the native varieties of the Grape flourishing without care, and yielding abundant crops, and there is an absolute certainty of profitable results from the circumstances to which I have referred, and from the immense demand which already exists, and which would be enhanced by the purer and cheaper product of our own soil. Last, but not least, is the consideration of influence the vine culture would have on society. Many persons may oppose it from a supposition that it would generate or increase intemperance, when the very reverse must necessarily be the result.

To come to the rationale on this point, and to the exercise of common sense in our

arguments and decision; it is an established fact, that man throughout all ages and among all nations, has sought out some beverage to repair bodily exhaustion, or to cheer the mind by exhilaration. The pure juice of the Grape is an innocent beverage, grateful to our senses and nourishing to the system, and if its use in its natural state would not be beneficial, it is scarcely rational to suppose that the Deity would have scattered vines so profusely throughout our country, and imparted to it the susceptibility of adaptation throughout such wide-spread regions.

That man has abused and perverted its use, is no argument against the article in its pure and natural state, for what gift of Providence is there that has not been more or less abused?

It is sufficient for my purpose to point to every country where wine is produced in abundance, as the abodes of temperance, and where intoxication is comparatively unknown; and then to point to the non-producing countries as those where intemperance is the appalling curse of the land. In Italy, France, Spain, Greece, and Turkey, where cheap wines abound, intemperance is a parasite that finds naught to cherish its direful expansion. But in England, Scotland, Ireland, Germany, the British American Provinces, and in our own country, intemperance stalks abroad in full noonday power, and it appears by recent expositions in regard to the populous cities of England, that all branches of society, and even the dignitaries of the church, are tainted and polluted by the curse of alcohol. So exempt is Italy, with its almost universally vine-clad hills and vales, from the use of alcohol, that it is not long since a challenge was published, defying any one to say that he ever saw a drunken man in that country. Much

has already been done to eradicate this evil from our own country, but a perfectly triumphant result can never be attained, until vineyards become widely extended throughout our land, nor by any other means than superseding the use of alcohol by the gen-

eral substitute of pure and unadulterated wines, which are weaker than cider, and impart a moderate degree of exhilaration to the weary, without producing intoxicating effects.

Flushing, Jan. 1847.

On Propagating Trees and Shrubs, by Pieces of the Roots.

BY ANDREW SAUL, HIGHLAND NURSERIES.

THIS mode of multiplying scarce trees and plants, does not appear to be practiced by our horticulturists as generally as it advantageously may be; either from a want of knowledge of the mode of operation, or of the many trees, shrubs, plants, &c., that can successfully be propagated in this manner, when other means are difficult, and often impracticable.

The manner in which cuttings of the roots should be prepared, is to cut a piece of root horizontally in lengths of from one to five or six inches, in proportion to the size of the root and kind of plant to be propagated; thus in preparing cuttings of roots of the Chinese Ailanthus, (*Aglandulosa*), or the paper mulberry, (*Broussonetia papyrifera*), the plants most commonly propagated in this way, it would be necessary to cut the pieces from *three to five or six* inches long; while pieces of an inch long, are sufficient of such green-house plants as *Pelargoniums*, *Acacias*, or that beautiful little plant, *Bouvardia triphylla* of the old catalogues, all of which increase freely when propagated in this manner, and the latter of which is difficult of propagation by any other means.

Among the numerous trees, shrubs, and plants, which may easily and successfully be propagated in this way, may be enumerated most of the species and varieties of the follow-

ing genera, viz, hardy trees and shrubs, that new and yet rare tree, *Paulownia imperialis*, as well as *Ailanthus*, *Catalpa*, *Broussonetia*, *Maclura*, *Gymnocladus*, *Kelreuteria*, *Paliurus*, *Populus*, *Rhus*, *Acacia* (the half-hardy varieties, such as *julibrissin*.) *Eleagnus*, *Hippophae*, *Halesia*, *Laurus*, (*Sassafras* and *Benzoin*), *Cydonia*, *Bignonia*, &c. &c. Hardy herbaceous plants, *Acanthus*, *Anchusa*, and many others of the *Boraginæ*; most of the fleshy rooted species of *Campanula*, such as *pyramidalis*; also *Papaver*, *Gailardia*, *Geum*, &c., &c. Hot-house, and green-house plants, and many of the species of *Acacia*, especially *pubescens*, *decipiens verticillata*, and others of similar habits; *Bouvardia*, *Convolvulus*, *Ipomea*, *Pelargonium*, *Geranium*, *Erodium*, *Dais cotinifolia*, *Nandina domestica*, &c., &c., together with many others of the *same* natural orders, and of similar structure and habits of *other* natural orders.

In the above list there are some plants of easy propagation by cuttings of the branches, or seeds when they can be obtained, but they are mentioned here as a hint to those who perhaps may not know that they can be increased in this manner, and under some circumstances, may be so to advantage. Thus, if a new *Pelargonium* is originated, and it is of importance it should be increased as speedily as possible for dissemination;

the branches of a medium sized plant, if cut up into the smallest pieces for cuttings, will afford but a moderate stock ; but when, in addition to this, it is turned out of the pot, and the earth carefully shook out from among the roots, and the greater portion of those cut into pieces of an inch long, each of which will make a plant, those will add materially to the stock in the same time ; while the plant may be re-potted, and will soon recover again, and make new roots and branches.

The best season to prepare roots for propagation in this way, is the *spring*, for all hardy plants, and spring and early summer for pot plants. The best moment, is that when a plant manifests the first disposition of being excited into growth. Roots, prepared as above directed, of the more hardy and vigorous growing kinds of trees and shrubs, may be planted out in rows in the open ground. The soil being made mellow and deep, the roots should be planted so as to leave the upper end of the cutting just level with the surface of the ground. If the root cuttings are planted in rows running east and west, they may be *shaded* with advantage, for a few weeks at first, by a board set up on the south side of the row. This will usually ensure the growth of all roots, cuttings of the hardier trees and shrubs. Those not so easily excited into growth in the above way, had better be planted under frames or hand glasses in the open ground, and kept close until they begin to grow, when they should have air occasionally, as the weather may permit, gradually increas-

ing it, until finally the light or sash can be dispensed with ; the more tender kinds of shrubs and plants should be planted in frames or hand-glasses, on hot-beds, either planted in the earth placed directly on the hot-bed, or in boxes, or shallow flower pots placed on the hot-bed in the frame, to be attended to as regards air, &c., as above ; cuttings of the roots of hot-house and green-house plants, should always be planted in pots, the top or upper end of the root even with the surface of the earth as before, and should be kept in the hot-bed, hot-house, green-house, or propagating house, as may be most convenient, and shall appear most congenial to the kind of plant to be thus increased.

A. SAUL.

Newburgh, January, 1847.

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[The above brief hints on a mode of propagating trees and plants which is but little practiced in the United States, will no doubt be acceptable to some of our amateurs, or to young gardeners who have not yet mastered the important details of propagation. Some shrubs and trees seldom bear seeds, and emit roots very slowly by layers, and hence are not half so general in our ornamental plantations as they deserve to be. We may point to that bright and pretty shrub, the Japan Quince, (*Cydonia japonica*,) as a case in point. We have seen one gardener labor for years to raise a dozen new plants of this shrub, by the ordinary method of *layers*; while another, from bits of the roots taken off the parent plant without injury to it, has propagated an hundred, in a single season. Ed.]

THE BIZARRE ORANGE—A VEGETABLE PARADOX.

BY J. W. KNEVELS, FISHKILL LANDING, N. Y.

DEAR SIR—I have translated and condensed from that beautiful and somewhat scarce quarto volume, the "*Histoire des Orangers*," by RISSO and POITEAU, an account of one of the rarest and most remarkable of the many varieties of the genus *Citrus*, described and illustrated in that work. It is a variety so anomalous and so little known in collections in this country, that perhaps the account may interest some of your numerous readers.

Yours, J. W. K.

Fishkill Landing, Jan. 8, 1847.

off as the result of their own wonderful art; but finally Peter Nalo, a Florentine physician, succeeded in tracing this Proteus of trees to its true source. According to him, it sprung originally from seed in the nursery of a gardener at Florence, and having missed in the inoculation it was accidentally overlooked and not regrafted; having shot out branches from the wild stock, he was surprised to see it bearing such extraordinary fruit and was willing to have it believed that it was produced by his own ingenuity.

The Orange termed bizarre, or *fantastical*, presents in one and the same individual, sections entirely homogeneous and pure, of three or four entirely distinct species. In this tree, are often seen branches covered with the leaves, the flowers, and the fruit of the Citron, suddenly changing, producing those of the bitter Orange. Frequently a fruit is found Citron on one side, and sweet Orange or Bigarade on the other; some are even found divided into four sections, Citron and Orange, alternately.



Fig. 95. The Bizarre Orange.

The Bizarre Orange.
Bigaradier Bizarrierie. RISSO ET POITEAU.
Citrus Bigaradia Bizarra.
Melangelo Bizaria, &c., &c., &c.

This is perhaps the most singular and curious tree in the whole vegetable kingdom. Its origin was for a long time held in a state of mysterious uncertainty by the pretensions of quacks who wished to pass it

that M. Chevalier reports having seen in the garden of St. Martin de Pontoise, fruits composed of the *Orange*, *Citron* and *Lime*.

Volcamer, in his "*Hesperides de Nuremberg*," has given four plates, representing as many different variations of the Bizarre Orange. Imbued with the prejudices of

his time, this author confesses great admiration at the skill, by which man has been able to obtain such curious results from grafting.

La Pipe, gardener to the Duke of Orleans, Regent of France, during the minority of Louis XV, had made a numerous collection of this family, among which were seen Bizarres of two, three, *four* and *five* intermixtures, one variety of which had variegated foliage. This tree flowers every second year; sometimes all the flowers are white, producing Bigarades and sweet Oranges; more frequently, the flowers are large, and of a dull white, the fruit of which are mixed; finally, it sometimes puts forth flowers, tinged externally with red, and becoming true Citrons.

Thus, from the same stock, we may gather sweet Oranges, Bigarades, (*i. e.* bitter Oranges,) coronetted or plain, Citron, Limes, and all these sorts, intermingled in the same fruit. Sometimes the Citron only affects the external portion, but at others, it penetrates to the axis of the fruit; fruit have even been seen with four portions, Bigarade and fine Citron, disposed crosswise. Finally, the same tree, after having borne mixed fruit, ceases to bear any but plain. From all this, it would appear that in this vegetable, the elements of three or four distinct species circulate within the same bark without intermingling, and force their way through whenever they can, for they do not show themselves at regularly determined distances or periods.

Notes on the Market Gardening of New Jersey.

BY H. W. S. CLEVELAND, BURLINGTON, N. J.

THE species of culture to which the land in any section of country is subjected, must depend not only upon the nature of the soil, but upon convenience of access to markets, and the nature of the markets themselves. Thus it is obvious, that the culture of fruit and vegetables can only be carried on advantageously, on a large scale, either in the immediate vicinity of a large city, or in such places as are brought near, by means of steam communication; while on the other hand, where such convenience exists, those crops must be the most profitable which can be grown, provided the soil is such as to admit of their culture.

Bearing these facts in mind, a glance at the map will suffice to show that the farmers of this section of New Jersey, must find the raising of fruits and vegetables for the great markets of New-York and Philadel-

phia, to be the most profitable use to which their lands can be applied; yet one who has not witnessed it, can hardly realise the vast amount of such produce, which is daily despatched, by cars, steamboats, and sloops, during the market season; and to one accustomed to see only small patches devoted to such crops, to be tended at odd times, between the more important farm labors, it is a matter of curiosity to see large farms entirely devoted to their culture. Such farms are to be seen here, resembling, during the season of cultivation, vast gardens, rather than farms. Single fields of strawberries or melons may be seen, containing ten or twelve acres, and peas, beans, cucumbers, sweet potatoes—in short, every description of vegetables is cultivated on a scale truly astonishing. The sandy loam which constitutes our soil, not only facili-

tates such culture by the ease with which it is worked, but is extremely favorable to the early ripening of all kinds of vegetables, enabling us to send our produce to market ten days earlier than our neighbors, on the opposite side of the Delaware river, who do not therefore, attempt to compete with us, but devote their farms to grain and grazing.

The first labor of the season on a "truck farm"—every species of kitchen garden produce being known here under the general name of "truck"—is the making of hot-beds, which is done about the middle of February, and in which are planted tomatoes, egg plants and cabbages, and at a later season, sweet potatoes and peppers. Peas are planted as soon as the ground can be plowed, which is generally the last of February, or first of March, and green peas are picked at the end of May, at which time strawberries also are ripe. Tomato plants are set out in the field about May 10th. The soil must be sandy, and is prepared by plowing and striking out in cross furrows, three feet apart, at each crossing of which, a shovel full of stable manure is thrown, and a hill raised over it, in which the plant is set. Ripe tomatoes are picked early in July. The first truck sent to market is asparagus, of which there are fields in this vicinity containing twenty acres, the cutting of which, employs many hands, and was described to me by a laborer, as "the back-achingest work he knowed of." The cutting commences about the 10th of April, and is done with a long knife made with a shoulder in the blade close to the handle, with which the stem is cut five or six inches under ground. And here let me notice an article on the culture of asparagus, in the first number of the *Horticulturist*, by "T. B. of New-York;"—formidable initials to differ from on the subject of gardening, I

confess. He complains of the practice of most marketmen, of cutting asparagus when it is one or two inches high,—when they have "two inches of what grows above ground, and four or six of what grows below"—which he adds is "as tough as a stick." This is perfectly true, and if the stem is allowed to get two inches above ground before it is cut, it is certainly better, as he says, to wait till it is five or six inches high, and then cut it even with the ground. But it is also true, that the part which is under ground is tender and delicious, up to the moment that it appears above the ground, in accordance with the theory which governs all plants, that no woody fibre can form in the stem till the first rudiment of a leaf is formed and begins to perform its functions.* Now the asparagus being a plant of very rapid growth, would very soon form too heavy a top for the tender stem under ground to support, were it not that nature has enabled it to form woody fibre with proportionate rapidity, from the moment its head appears above ground,—previous to which there existed no necessity for it. If therefore it is cut, as is the practice here, the moment it shows itself,—the white stem,—which by the time it is two inches high is hard and tough, will be found perfectly tender and delicious. But to return from this digression. Early potatoes are planted about the middle of March, and a prevailing opinion, amounting in some minds to a superstition, has fixed upon St. Patrick's day (17th March,) as the lucky time to commit that seed to the ground. Potatoes are invariably planted in drills and manured with stable manure or marl, which is abundant, and preferred by many to any other manure. It is obtained from the pits at twenty-five cents per wagon load, or delivered in Burlington from sloops, at seven-

* Vide Lindley's *Horticulture*—page 22.

ty-five cents per ton. It contains a very small proportion of lime, but owes its fertilizing property to the potash of which, according to the analysis of Professor Rogers, it contains from nine to thirteen per cent. Green corn is cut by the middle of July, and early peaches are in perfection at the end of that month, though they are gathered prematurely ripe from old trees as early as the 20th. Such are fit only for cooking, but often bring a higher price than the very best after they become plently.

Philadelphia is of course our principal market, but for the earliest produce, a higher price is obtained from the agents of New York marketmen, who drive a brisk business every day at the railroad station in Burlington, which thus becomes a market to which the farmers bring their first peas, tomatoes, corn, &c., with which New-York is supplied a week or ten days before the same produce comes in from Long Island and other places in the immediate vicinity, after which it is no longer an object to send from here. A train of market cars leaves here every evening during the season for Amboy, where its freight is put on board a steamboat and taken to New-York to be exposed for sale at daylight next morning. During the peach season, cars constructed expressly for carrying that fruit, open at the sides and provided with spring shelves on which the baskets are placed, are attached to this train. Fruit may also be sent for Boston by the morning train, which arrives at New-York in time for the evening boats down the Sound, so that it reaches Boston in twenty-four hours from the time of leaving here.

A market train for Philadelphia leaves Burlington every morning and evening, besides which, two steamboats leave our wharf every morning, and one every eve-

ning, for the same place, and sloops ply constantly from various landings, suited to the convenience of the neighboring farmers. These reach Philadelphia in an hour and a half, and their freights are for the most part, sold on the wharves to hucksters, who retail them in all parts of the city. Some farmers accompany their produce and dispose of it themselves; others send it to agents in the city, or entrust it to men who go down daily in the boats and make a business of selling truck on commission,—a business requiring much experience, skill and precision, in disposing of the various lots to the best advantage, keeping the separate accounts for the different owners, and having a careful lookout for the baskets,—the theft of which, among marketmen, seems to reflect no more upon a man's character for honesty, than cheating in a horse trade. The basket holds,—or ought to hold,—three pecks, and is the measure by which almost every species of truck is sold.

Prices of course vary according to the season and the quality of the articles. I have known five dollars paid for a basket of tomatoes,—the first of the season,—and three weeks later, have seen the same quantity sold at $12\frac{1}{2}$ cents. In fact, it is only the earliest produce which pays; and I have seen cart loads of the most delicious nutmeg melons, given to hogs, when a purchaser could not be found at $12\frac{1}{2}$ cents per bushel.

Watermelons are sold by the hundred, and range from \$3 to \$20 per hundred. Strawberries are picked by women and children in little square boxes, holding a pint each. A cent a box is paid for picking, and the fruit sells at three to six cents per box.

As yet there has been comparatively little attention paid to the cultivation—and none whatever to the forcing—of choice fruits,

owing probably to the fact, that the men engaged in the business, are, for the most part, of a class who are unwilling to engage in any employment which does not promise a speedy return for the investment. Peach trees, however, grow so rapidly, and with so little care, that large orchards are planted annually; and the ground being kept in cultivation, in three years a large crop of fine fruit is gathered, after which, the trees decline, and a second crop, for the most part, finishes them; it being considered cheaper to plant new trees annually, so as to have a constant succession of young trees, than to attempt to preserve or renovate the old ones. Enough has been done by individuals, however, to prove the fitness of our soil for the culture of every species of choice fruit.

The plum, and other smooth skinned fruits, it is true, are liable to the attacks of the curculio, which finds a safe harbor in our sandy soil, but wherever his attacks are guarded against, the finest fruits are produced. To any one desirous of making a business of cultivating choice fruits, this

portion of New Jersey offers such a combination of advantages, as could hardly be found elsewhere. A large portion of the lands may yet be bought at far less than the value they might be made to attain, under proper cultivation, and a choice of trees may be had in this vicinity, from some of the best nurseries in the country.

A taste for such culture, is indeed rapidly forming, and the efforts of the State Horticultural Society are doing much to foster and increase it. Indeed, the success of the Society itself, is an evidence of the sense which the people have of the importance of its objects. It has been in existence only four years, but has gone on steadily increasing in strength and spirit, in spite of many sage predictions that it must fail, which predictions were mainly based upon the fact, that we have no large city in which to concentrate our forces, and whose wealth should furnish the means necessary for its support. Your ob't serv't.

H. W. S. CLEVELAND.

Oatlands, Burlington, N. J., Jan. 20th, 1847,

APPLES IN VERMONT.

BY CHAUNCEY GOODRICH, BURLINGTON, VT.

START not, gentle reader, at our title, if you have supposed that "out of the world and in Vermont," we really "never use snow until two years old," and that we subsist much like the natives of Lapland. Just visit us next season, and you will see a little State, though usually called the Switzerland of America, whose agricultural products are greater in proportion to her population than that of any other State in our Union, and among them a few apples besides other fruit.

A large portion of our State was settled immediately after the close of the war of

the revolution, and among the settlers were great numbers of the officers and soldiers of the continental army, who, destitute of any means except continental money, not then current, came here, where they were sure of obtaining plenty of wild land, and a hearty welcome from the hardy Green Mountain boys who had so recently absolved themselves from all foreign control, and established a government of their own.

Most of them, like the honest Germans from *Fader Land*, brought seeds with them, and among these always a small bag of apple

seeds, as cider was then considered almost an article of necessity in the older New England States. Some brought seeds gathered from cider mills, but a large portion were seeds from favorite apples, supposing they would produce the same fruit. In this way great numbers of superior *native* apples have been produced, which are known only by local names; and great numbers have been disseminated by wrong names, being seedlings from the variety whose name they bear. As an instance, the *Rhode Island Greening* may be named, which has been scattered over the State by grafting. While some are fully equal or superior to the parent tree, others can hardly be recognized as belonging to the same class.

Every settler sowed apple seeds, or procured trees from his neighbor and planted an orchard; and to encourage raising apples, the Legislature in 1791, passed an act exempting from taxation for ten years, all lands on which forty apple trees on an acre were planted. Almost every farmer soon raised his own apples and made cider, besides having much cider distilled for cider or apple brandy. For the last twenty years but little cider has been made, and during the temperance excitement some fifteen years since, many of the finest orchards were cut down, which might have been made valuable by improving the fruit and raising it for feeding to hogs, or cattle, or for exportation.

The old orchards during this time have been generally decaying, except in a few towns where an industrious cultivator has set an example by renovating his old trees, and showing them that they may be again made as "good as new." There is now more attention given to fruit, the subject being discussed in almost every county, by agricultural societies, and hundreds of nurseries have been sowed during the last two

years, and much inquiry is made for the best methods of treating old orchards.

There is a great difference in our soil and climate for the growth of fruit trees. The whole of the western part of the State is favorable for the growth of apples, and may be considered one of the best sections in New-England for superior fruit. The eastern part, for one hundred miles from the south line, is as good as an average of New-England, while the central and northeastern parts are not favorable for fruit, though in most places, by selecting proper varieties, and planting in favorable situations, they may be successfully grown. More attention has been given to cultivating apples in Bennington, than in any other town in Vermont. It is one of the oldest towns in the State, has a fine soil and favorable climate, and among their first settlers, their minister was an enthusiastic and scientific pomologist. His labors (at least in this line) are still seen, in their numerous and healthy old fruit trees, scattered through the town. Many varieties of English apples, and the best natives of Canada, were among the first introductions of foreign fruit on the borders of Lake Champlain, and among them, varieties lately introduced into Massachusetts from England, of which old trees may here be seen. Many apples are sent from towns bordering on the lake, in the counties of Chittenden and Addison, to Canada, for a market; and this part of our State must be called the best for the growth of apples; and we may safely challenge the world to produce finer ones than we can here.

In most parts of the State apple trees flourish well quite to the borders of our largest streams, except on alluvial soil. There is, however, one exception.

On the Missisco river, which runs through the northern towns of the State, for some

fifty miles, and empties into Lake Champlain, although a fine agricultural region, no apple trees can be found within three or four miles from the stream, in a healthy bearing state, and few of any sort. I had often heard this stated, but supposed no attention had been given to their cultivation—but while at the house of *Chief Justice Royce*, who resides on a large farm, where he was born, on its banks, he informed me that in no part of the State had the farmers

and others more faithfully tried to raise apple trees than on the banks of this river; that they grew well while young, but invariably died when grown to the size of bearing trees. This cannot be attributed to climate, as on higher and colder land, three to four miles from the stream, apples are grown successfully. If any pomologist can give a reason for this failure, I shall be very happy to hear it. CHAUNCEY GOODRICH.

Burlington, Vt., Jan. 1847.

REMARKS ON ROSES.—No. III.

BY DR. WM. W. VALK, FLUSHING, L. I.

A FRIEND has intimated that according to his experience, the *Damask Perpetuals* will flower *more* than once, if planted in very rich soil, and *pruned* immediately after the first flowers have faded. We mean to say, that if left to themselves, with but the usual spring pruning, they will not, as a general thing, flower more than once, yet we doubt not, that with the treatment indicated above, a second crop of flowers may be obtained, not only from the damask perpetuals, but also from several families usually regarded as Summer Roses only. We have already insisted upon the necessity of growing the Rose in the *very richest kind of soil*, and again caution the amateur against attempting to grow them in any other, unless he is perfectly indifferent as to the appearance of his plants, and the quality of their flowers.

We now continue the subject of pruning, having, in our No. 2, remarked on the steps necessary to form bushes, and to give handsome heads to standards. Next in order, we proceed to speak of pruning and training Roses, on pillars or columns, flat trellises, walls, and the fronts of houses.

Pillars for Roses are best when made of

trellis-work, or rods of iron, but they are generally of wood, and should not be less than one foot in diameter. We will suppose the planting has been as carefully done as we recommend it should be; that the plants have been cut down to the ground, or nearly so, and that they are now making their new growth. As the leading shoots advance, they are to be arranged spirally around the pillar, so far distant from each other, as to permit the filling up of the space between with foliage; these leading shoots then form the tree, and all the side shoots bearing blooms, the pillar of Roses is systematically and handsomely formed. We do not assert that all this is done in a year, though some varieties will almost do as much; and here, as in all other cases of Rose pruning, the little weak shoots must be removed, the strongest left on all the way up, and shortened to two eyes. It sometimes happens that the tops die down, in which case they must be cut back to the *strongest* eye, not to the top one, because this and several others may be weak, and never would be otherwise, whereas the stronger one will grow fast, and soon supply the

place of those which were lost. In the spring, when the buds first begin to swell, look over your Roses carefully, and remove any that are likely to be in the way; for you will find the growth of some Roses altogether different from others, many requiring a great deal of space to develop themselves properly for blooming, while an equal number occupy but little room, and bloom freely on their short branches. If nothing was said about it, one or two seasons would discover these characteristics, but with this explanation, you can the more satisfactorily regulate the growth of your plants. Many climbing Roses are wanted to run over arches, or from pillar to pillar: the best way of managing these, is, to thin out the weak branches only, of those portions which form the arch or festoon, and not to shorten the strong ones at all, for they will bloom abundantly without it; and the loose and free manner of their hanging about, provided they are kept within due bounds, will cause them to appear to great advantage.

In training Roses on flat surfaces, such as the fronts of houses, walls, and flat trellises, the course to be pursued does not differ much from that above detailed. The leading shoots must be encouraged to grow as you want them, to fill the space allotted to the plant. In some cases it will be best to train two shoots horizontally, right and left, along the bottom, and from these, permitting all the *upper* buds to grow, the shoots can be regulated with a great deal of neatness and taste. Where the space to be covered is all one way, train one strong branch horizontally, and turn up the end; remove all weak side shoots, and fan out the others at equal distances. With quick growing plants, a large space may soon be entirely covered, and flower from top to bottom, thus presenting a splendid object, which, if the plant be *Hybrid Bourbon*,

Great Western, or *Bourbon Enfant d'Ajaccio*, will exceed in beauty anything of the kind ever seen. Two better Roses, for the purposes of training in any fancy way, can not be found, and the first is a beautiful thing, grow it as you please. When the entire space allotted is completely filled, all weak shoots must be cut away, every season, only permitting the strong ones to develop themselves, and keeping all the branches closely tied or nailed to the surface, you will have your plants look neat and tidy. The loose and free manner of training around pillars, &c., is not suited to a *flat* surface, and would spoil the effect entirely, if permitted.

At this point, in our remarks on Roses, a great deal might be said on the subject of forcing the various classes, of potting them, preparing for exhibition, &c., but as we did not intend to write a treatise, or say more than we have already, on particular operations, further details will be deferred to some other time. Not to break off too abruptly, however, we proceed to say, that of all plants, the Rose yields the most readily to a proper course of culture, and will certainly repay the grower for all the care he may bestow. If the amateur desires an *abundance* of flowers, regardless of their *size*, he must be cautious in the handling of his knife; take out all *weak* shoots, but leave on plenty of wood, so that every eye may give one or more blooms. As there is so much of it, the new wood will be short, nor is this any disadvantage, under the circumstances. But if *large* flowers are wanted, all the strong wood of the previous year must be cut away, leaving but two eyes, and removing some of it altogether. By this course, there will be but few flowers, yet they will be large and fine. We have insisted upon growing the Rose in a *very rich soil*; still, Roses will grow

in a poor one, but the wood will be weak and short, and the flowers small. Besides, when a Rose is starved, *it is very apt to come semi-double*, thus undoubtedly causing many to be thrown away that should not have been, and others to be regarded as wrong varieties, when they wanted nothing but good growth to make them right ones. A rich soil will cause the Rose to grow very strongly, and if such be the pleasure of the cultivator, he may have his plants of any intermediate growth between strong and weak, according to the quality of his soil. It is very generally thought that to make a rich soil, dung only is required. This may be the case in numberless instances, where other plants are cultivated; but, to grow the Rose as it ought to be, in appearance and size, *loam* is absolutely required, and if your soil does not contain it, it must be added, say half loam and half dung, to be well mixed in before planting. When Roses are properly planted, they should always be neatly tied to stakes, as a protection from the injury of the wind, either to the plants or flowers, or both. The material for fastening, is usually bass matting or woollen yarn, sometimes a piece of thread or string, but none of these is half as good as *lead wire*, of the proper size; all the others are perishable, frequently giving way, and subjecting the plants to damage before it is noticed. It is a fact deserving of notice, that but a few of the really double Roses, among all those at present cultivated, open out as well as the semi-double ones. In consequence of this defect in the larger proportion of the finer sorts, they can not be exhibited as single blooms, or stand the test of a critical examination. If it be the desire of the amateur to grow none but *perfect* flowers, the selection should alone embrace those which experience has shown to expand well, and to

present a perfect face when full blown. When exhibited singly as Dahlias are, it takes a good Rose to pass the ordeal of a capable and discriminating judge, and under such a trial, many *new* Roses will be discarded, while well known old and fine Roses will be justly appreciated. True, this mode of exhibiting a flower is not the most attractive, but it is altogether the best method of testing its qualities, and too frequently discloses numberless varieties with very glaring faults. At all the exhibitions we have ever attended, quite a number of flowers have been seen upon the stands with conspicuous defects. Some are close balls of petals, with the outer ones rolling back a little, as if shrivelling, but never opening fairly. Others freely display their yellow stamens, having too few petals to conceal them; some are on stems too weak to hold them up if lifted; and others, again, are only a confused mass of ill-formed petals, compensating nothing for their sweetness. Some can not be touched without dropping to pieces, and others are shapeless masses of a miserable flimsy texture, without fragrance, or one single quality to recommend them. Such are the things too frequently seen at our horticultural exhibitions, brought out with all the claims of *novelty*, yet not half so good as the Tuscan, the old Cabbage, the Provence, and some others of the long known varieties.

The exhibition of Roses in pots, has become quite a feature in the regulations of most horticulture societies, and it is a very pretty way of showing them, if *properly cultivated*. We generally, however, find them too much drawn, and very unnaturally supported. If the plants have been forced, some allowance must be made for it; but he alone deserves a prize for his skill, who can produce his plants *without support*; not the man who draws his plants until they

cannot support themselves, and then keeps them up with an army of sticks. We protest against the system, as one of the worst ever tolerated, and hope to see it discarded as altogether unworthy the notice of every intelligent gardener. Horticulture cannot

be advanced without judgment, skill, and untiring perseverance; and he best understands it as a science worthy of all his industry and application, whose practice is regulated by systematic experience.

Flushing, L. I.

WM. W. VALK, M. D.

TRANSPLANTING LARGE TREES.

BY GEORGE JAUQUES, WORCESTER, MASS.

AMID the diversified scenery of rural life in New-England, there is much that has not yet called into exercise the painter's pencil, or the poet's pen. In journeying along our dusty roads, in the sultry summer months, how pleasant it is to come upon an ancient farm house, standing a little removed from the public highway, with a green grass-plot in front, and one of those gigantic trees, the American Weeping Elm, towering up in the midst, casting its grateful shade over the whole place. Remove that guardian tree, and the witchery of the scene is gone.

But alas! does the owner of those premises ever listen to the "music that dwells in whispering boughs?" Does he not indeed cherish a sort of hereditary contempt for trees, whose flowers are ornaments, whose fruits are shadows? Has he not, while grinding his axe, more than once thought how easily he might fell that forest monarch, and convert its severed trunk and limbs into—the root of all evil? We hope he has not—indeed we hope he has not; for the number of those who set a value upon such things, is daily increasing, and it is a blessing to the country that such tastes are fast becoming popular every where.

To those who may desire to replace what the too utilitarian spirit of a former age has swept away, the following mode of transplanting large trees, may not be unacceptable.

At a distance of from four to six feet from the body of the tree, which is to be removed, dig a circular ditch around it, two or two and a half feet deep, cutting off all the lateral roots of the tree, close to the mass of earth which is left around it. This ditch, dug late in the fall, must be kept free from snow until the central mass of earth is thoroughly frozen. This ball of earth containing the roots of the tree, must now be forced up with levers, and two or more strong skids placed under it. By means of a strong tackle—set of pulleys—this mass of frozen earth and the tree altogether, may be drawn up out of the hole, on to a stone-drag or sled—the tree standing vertically thereon, just as it grew. Thus loaded and secured, it is easily drawn to the place selected for it.

The hole which is to receive the tree, should be dug in the fall, before the ground freezes; the earth taken out of it, should be covered with straw and boards to prevent its freezing. Lay skids from the sled or drag, into this prepared hole, and slide the tree carefully into it. Raise up with a lever, and block the mass of earth, until the tree stands properly erect, and then fill in all around and under it, with the loose earth which has been kept beneath the straw and boards for this purpose.

Great care should be taken not to set the

tree deeper in the ground than it stood previous to being moved.

The hole for receiving the tree should be at least two feet larger in diameter, than the frozen mass, containing it. In filling up around and under the tree, it would be much better to use good rich soil, instead of the poorer dirt that was thrown out in digging the hole. For this purpose, a quantity of earth might be kept in barrels in a cellar, where it would not freeze.

A light top-dressing of soil and compost manure, ought to be put around the tree in the spring, after which it will require no further attention.

Trees of all kinds, removed in this way, always live. The writer assisted in transplanting a hickory tree of the shell-bark variety, in the winter of 1839, by the above process. The tree in question, was about thirty feet high, and one foot through, at the surface of the ground. It sustained very little check by its removal, and, for the

last three or four summers, has appeared perfectly healthy and vigorous, and has borne four crops of nuts. Taking into consideration the great size of this tree, and the extreme difficulty with which the hickory is transplanted, even when of very small size, the experiment may be regarded as a very convincing one.

Since that time, the writer has assisted in removing large hemlocks and other trees, by this method, all of which, without a single exception, have lived, and entirely outgrown the slight check which their removal occasioned. The whole expense of such an operation, does not exceed five or ten dollars. But the tree will at once produce an effect, and will grow and wave in the breeze, and birds will sing sweetly from its boughs long after the hand that planted it shall have relinquished the pleasure of transplanting trees.

GEORGE JAKUES.

Worcester, Mass. Jan. 27th, 1847,

QUINCE STOCKS FOR PEARS.

By S. G. PERKINS, Esq., BOSTON.

THERE is a strong prejudice in this country against Quince seedlings as stocks on which Pears should be grafted; but I think, if the question is properly considered, it may be removed. First, it is said that they are short-lived, and that they die of diseases to which the *free* or *pear* stocks are not liable. That they are shorter lived than pear stocks, there is no doubt; but when we consider that they are brought into bearing in a year or two after they are grafted, and when quite small, while the *pear* stocks require many years to bring them to the same advanced and fruitful state, we think, it is undeniably a compensation.

It is also true that a pear stock may produce ten times as much fruit, when full-grown as a quince stock, but the advantages are perhaps fully balanced in other ways, as follows: Pear stocks must be planted at least *thirty* feet apart, and even at this distance, when grown to any size, they will shade so much of your ground, as to interfere seriously with its cultivation; the roots also extend in proportion to the head, and exhaust of course, so much soil as they cover. Now quince stocks may be planted within *ten* feet of each other, and have room enough for their heads; while their roots, being all fibrous, are circumscribed in their growth,

requiring very small space, and exhausting none of the soil under cultivation, and their heads shade no ground in consequence of being limited by *pruning*, to six feet in diameter, and not being allowed to extend upward more than eight or ten feet.

On an area sixty feet square, you may plant *four* pear stocks; these will shade with their branches, and exhaust with their roots, at least one-half of this square. On such a lot, you may place around its borders *twenty* quince stocks, which will neither shade the ground, nor exhaust its soil. These stocks will produce you fine melting fruit with certainty, if taken care of, while all the care of the gardener and proprietor united, will not prevent some kinds of pears from canker, cracks, and blight, if produced on pear stocks.

"But," say the advocates for pear stocks, "the quince is subject to be destroyed by the borer!"

This is true, and so is every thing subject to be destroyed in one way or another, if it is not taken care of, by those whose duty it is to look after them.

I have nearly or quite a thousand pears on quince stocks in my garden, and I doubt if any one cultivating an equal number of pear stocks of the same size, has for the last twenty-five years, lost as few trees as I have.

With respect to the borers, if care be taken to examine the trees twice a year, without fail, say in the middle of June, and the middle of October, there will be few or no borers in the garden. There is little or no trouble or labor in this, if it be done regularly. My gardener will examine and destroy all borers that he finds in six or seven hundred trees, in a day. I have counted seven hundred and thirty-four trees, which he had examined in that time. This, therefore, is no herculean trouble or labor.

These quince stock pear trees may be fruited on all sides by judicious pruning, from the top to the bottom, within a foot of the ground; and as the melting or soft-fleshed pears, which are called *Beurres*, are much better on these than they are on the pear stocks, you may have more good fruit on your quince, than you can get on your pear stocks.

If you want trees to plant in *grass ground*, I should recommend pear stocks by all means; but in *gardens* I should choose to have the bulk of my fruit on quinces.

If you undertake to raise pears on seedlings, or layers of one or two years old, you will find how much sooner they get their fruit on quinces. Quince layers are very easily obtained by any one having quince trees in their grounds. The *Portugal Quince* tree, is the best to strike from, as they grow more freely and larger than the common sort, and will increase with the growth of the pear scion that is put into it; but this, the common sort will not do. But it is much cheaper, and more sure, to import from France, both your seedling pears and quince layers, if you wish to cultivate a nursery.

I have now in my garden, many pear trees on quince bottoms, growing both as standards and as espaliers, which were planted upwards of twenty years ago. They are both in perfect health, and full-bearing every summer. The only objection to the standard pear stock is, that if left to itself, its head grows too large for its roots to support it steadily in the ground, but this objection does not apply to the espaliers. It is therefore best to keep their heads pruned within limited dimensions, if you raise them as standards, but quince bottoms are far preferable for espaliers to pear stocks.

Pears on quince stocks will live to a good age, if taken care of, and no exciting ma-

nure be allowed to come to their roots. If they become weakly, apply fresh, virgin soil to the roots in the room of manure.

SAML. G. PERKINS.

Brookline, near Boston.

REMARKS—Our esteemed correspondent has undoubtedly had more experience in the cultivation of pears on the quince stock, than any other person in the country, as it is nearly forty years since his first planting

of this kind commenced. His very great success, and long practice, entitle his remarks on this subject, to careful attention. The *Portugal Quince*, especially commended by Mr. PERKINS for this purpose, has been very little known or used hitherto, in the United States. From its greater vigor, it is undoubtedly far better adapted for a stock for the pear, than the common quince.—ED.

DESIGN FOR A SMALL VILLA.

(SEE FRONTISPIECE. FIG. 94.)

STATEN Island is undoubtedly one of the most agreeable suburbs of New-York. Its interior comprises many hundred acres of wooded surface, varied by hills, dells and glades, and affording delightful roads and drives; while its best portions offer many sites, which command admirable views of the ocean, the Narrows, and the bay and harbor of New-York.

We are not surprised, therefore, at the numberless rural improvements that are annually going on within its boundaries. There are some residences, on the island, highly remarkable in a landscape gardening and tasteful point of view, as, for example, that of WM. H. ASPINWALL, Esq., noticed by us in another work. And there are now, dozens of smaller suburban cottages and villas, more neatly built, and increasing in number every day. Some of these are exceedingly picturesque and ornamental; others, we are obliged to say are almost caricatures of the cottage style, and would better bear criticism as children's toys, or whims of the confectioner, than real dwelling houses, for rational men and women.

One of the most pleasing of the new residences on Staten Island, is one built by a gentleman, whose grounds are towards its

southern part, from the designs of A. J. DAVIS, Esq., Architect, New-York. Our frontispiece shows the front elevation, and the plan of the principal floor of this dwelling.

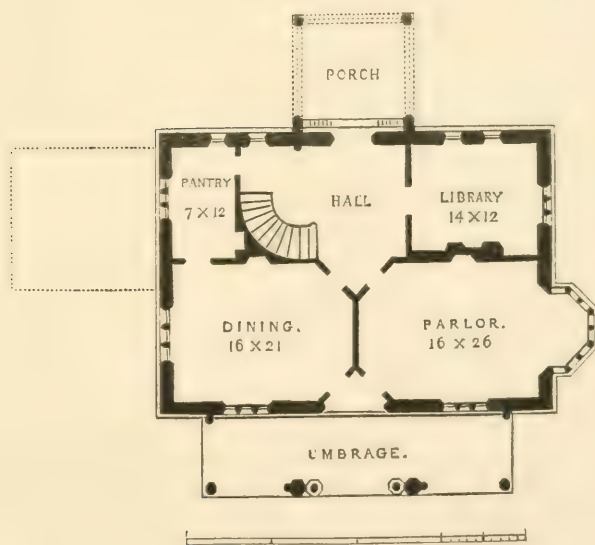
The style is Tudor Gothic, and the intention of the architect was to produce a pleasing and expressive building at a very moderate cost. The single large gable gives an air of originality to the design, which we think, at the same time, very pleasing in its effect.

By referring to the plan, which is simple and good, and sufficiently explains itself, it will be seen that the main entrance is on the side of the house, opposite the parlor front, shown in the elevation. This suits the locality of the house, and, by allowing the visitor to enter and obtain his first impression of the view from the windows of the side facing the best view, a stronger effect is produced by the landscape, than if the entrance were upon the same side that overlooks it.

The style in which the villa is designed, is a very excellent one, when the material to be used in its construction, is stone or brick. Its solidity, and the peculiarities of its details, render it, as we think, wholly unsuited to the employment of wood.



FIG. 94. A COTTAGE VILLA ON STATEN ISLAND.



GROUND PLAN OF COTTAGE VILLA.

NOTES ON TWENTY OF THE FINEST PEARS.

BY CHEEVER NEWHALL, ESQ., DORCHESTER, MASS.

SIR—In the December number of the Horticulturist, you have given the answer of several gentlemen of great experience, to the question, “which do you consider the three best pears.” As was to be expected, a variety of opinions was elicited. I have long been desirous that some one better qualified than myself, would give to the public the result of his experience in the cultivation of this delicious fruit, and state which are really the best varieties. I think it may be gratifying to those unacquainted with the cultivation of fruit, to know that there are at least *twenty varieties* of pears, already well tested in this vicinity, of great merit, and well worthy of extensive cultivation.

As no one has come forward to furnish such a list, I conceive this may be a proper time to ask permission to occupy a small space in your useful journal, for the purpose of adding to the catalogue of nine sorts, (see “*Pomological Gossip*,” in the December number,) the varieties which I consider the best and most profitable to cultivate in the New England States. I am well persuaded that I can furnish no catalogue to which *all* will assent, but my object will be attained, if the “uninitiated” derive any information by my remarks.

In the first place, I agree that all the varieties named by the distinguished cultivators referred to in the “*Pomological Gossip*,” should be labelled “first quality,” except the *Bloodgood*. This pear may be good in some soils, but I have never succeeded in ripening one that could be classed first quality.* In the next place, I shall add to their catalogue, three of our native varieties which originated in, and near this city,

viz: the Dix, Heathcot, and Andrews, with three foreign varieties, the Urbaniste, Paradise d’Automne and Passe Colmar; and for strong rich soils, the Flemish Beauty, Buerré Diel and Glout Morceau. These are, in my estimation, all of first quality, but not of equal merit. The Dix pear, sometimes, in this neighborhood, cracks in exhausted soils, but is a noble and delicious fruit, not surpassed, in my estimation, by any other pear known. The Urbaniste is more sure of producing a crop of *well ripened* fruit, than any other variety I cultivate, except the Bartlett and Vicar of Winkfield. The Passe Colmar seldom attains perfection, unless the fruit spurs are severely pruned out in the spring, or the fruit thinned when quite small. There are several other varieties, more recently introduced, but I have not yet thoroughly tested them.

As to Winter pears, for cooking, I esteem the Catillac as the best. It is very large, stews very tender, and is then of rich color, and superior flavor. The Black Pear of Worcester, or as it is called here, Iron pear, is the most profitable. The tree bears heavy crops of fair fruit, of large size. When cooked, it is of a sprightly agreeable flavor, but a little astringent. Both of these kinds are in use from December to May, and both require a rich clayey soil to insure their greatest perfection. One of my neighbors, who cultivates the latter pear largely, has realized for several years past, ten dollars a barrel, for his whole crop, by shipping them abroad.

For early fruit the Madeleine, (or Citron des Carmes,) ripening in my garden the last of July, and the Jargonelle, about ten days after, are the two best pears of the season,

* This is uniformly the very best early Pear here.—ED.

but cannot be classed as first quality. I have said nothing of the *White Doyenne*, or *St. Michael*, as I presume its merits and demerits are known to most of your readers. With me it succeeds well, when engrafted on quince stocks, but is worthless on pear stocks. The *Madeleine* is the reverse of this; it succeeds on its own roots, but on quince roots it cracks; is very astringent and worthless.

The *Easter Beurré*, is a pear of first quality, when well ripened, and will keep, with care, until May, but is, with me, a shy bearer, and often does not come to maturity.

In conclusion, permit me to state, that in my judgment, it would be greatly for the interest of cultivators of the pear, to give more attention to our four native varieties, the *Seckel*, *Dix*, *Heathcot* and *Andrews*.

The *Cushing*, a native, is a good fruit,

but ripens with the *Bartlett*, and is inferior to it.

CHEEVER NEWHALL.

Dorchester, Jan. 1847.

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REMARKS—The foregoing article will be very acceptable to those of our readers, who are in the "deep despair" of endless catalogues, and know not where to choose, amidst the infinity of names. After the expression of opinions, like those contained in this communication, from various sources of the highest character, in different parts of the country, we shall arrive at a correct estimate of the absolute value of the great number of fruits under high sounding names, that have been imported in the last fifteen years. Mr. NEWHALL is one of the Vice Presidents of the Massachusetts Horticultural Society, and a most intelligent and zealous cultivator, and his remarks are considered valuable on pomological subjects.—ED.

THE CHERRY PLUM AND HEATHCOT PEAR.

THAT remarkably early, very pretty, and very distinct little fruit, the *CHERRY PLUM*, better known, in some gardens in the United States, as the *Early Scarlet*, and in the collections of Europe, as the *Myrobolan*, is perhaps deserving of a few remarks from us, and of more attention at the hands of fruit cultivators, than it has hitherto received.

The *Cherry Plum* is not a high-flavored fruit; it is only what may safely be called one of pleasant flavor. But it is, we believe, the *earliest* of plums; it ripens at a season when fruit of every kind is exceeding scarce; and it is quite an ornamental as well as acceptable addition to the dessert in the month of July.

This variety is a rapid grower, and soon makes a neat bushy tree, remarkable for the great number of its small pointed leaves. It always blossoms most profusely, but it is

considered by many as a very poor bearer, and therefore rejected as of little value. It is on this point, that we wish to offer a suggestion of some practical importance. Mr. SAMUEL REEVE, of Salem, N. J., is the most successful grower of this plum, that we know; and the method he pursues, is worthy of attention, since he finds the *Cherry Plum* the most profitable variety, as a market fruit.

MR. REEVE attributes the usual non-productiveness of the *Cherry Plum*, to the fact that it is inclined to too great a production of leaves and wood. He therefore *transplants* his bearing trees, every five or six years. In this way, the over-luxuriance is checked, and an abundant crop of fruit sets and ripens every year. As he is able to send this variety to the Philadelphia markets early in July, when there are no other

Fig. 96. *The Cherry Plum.*

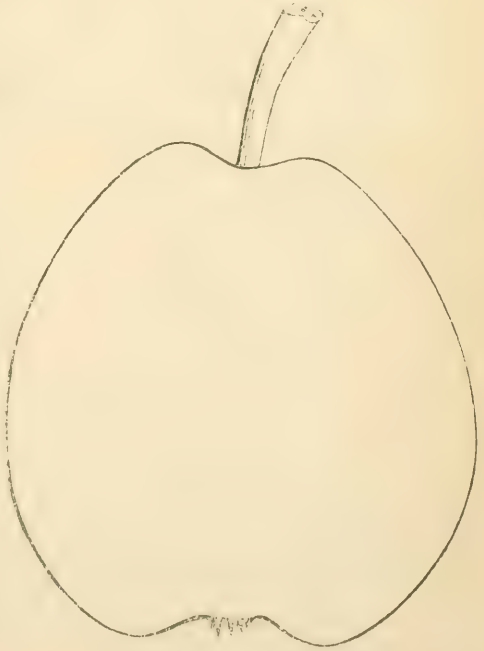
plums to be found, he usually realizes from five to eight dollars per bushel for them. This, of course, makes a plantation of the Cherry Plum more profitable than one of any other variety, unless, perhaps, we except *Coe's Golden Drop*, or some such fine variety, equally valuable, from the unusually *late* season at which it matures.

We presume *root-pruning*, performed every two or three years, would answer the same purpose, in rendering the Cherry Plum productive, as transplanting, and it would be attended with less labor and expense.

THE HEATHCOT PEAR.

We are confident, from our own observations, and the opinions of several intelligent cultivators, given us lately, that this most excellent New-England Pear, originated more than twenty years ago, has not hitherto been rated as highly as its merits deserve. The past season, 1846, was by no means a favorable one for fine fruits generally, and it was a general subject of complaint that pears were particularly indifferent in quality. Yet we tasted the Heathcot, both in New-York, and about Boston, of delicious quality; and Col. Wilder assured us, in October last, that after several years' trial, he considered it nearly, if not quite equal, to the old *White Doyenné*, or *St. Michael*.

When we add to this, that the tree is thrifty, and a good and regular bearer, and

Fig. 97. *The Heathcot Pear.*

that the fruit does not crack or blight, even in situations where many foreign varieties are very subject to those defects, we cannot but consider the Heathcot, worthy of being adopted into the select list of fruits, of the first quality, for orchard and market cultivation.

NEW OR RARE HARDY SHRUBS.

I. THE ROUGH-LEAVED DEUTZIA.*

Deutzia scabra.

THIS is one of the greatest acquisitions of the last ten years, to our list of fine hardy shrubs. It is a native of Japan, and like most plants from that country, bears our northern winters without the slightest protection.



Fig. 95. *Deutzia scabra.*

The *Deutzia* belongs to the same natural order as the *Syringo*, (*Philadelphaceæ*), and considerably resembles that old and deserved favorite of the garden; but it is a far more refined and delicate looking shrub in its

blossoms, and its habit of growth, than the common *Syringo*. The blossoms are pure white, and are produced in the month of May in the greatest profusion, in a kind of garland-like cluster, at the end of every branch. The shrub grows about six feet high, and forms a neat bushy head, of dark green foliage.

It is very easily propagated by cuttings and layers, and may be found now in most of the nurseries. We advise those who do not possess it, to obtain it immediately. It grows in any tolerable garden soil.

II. THE DOUBLE CRIMSON CURRANT.

Ribes sanguineum flem. plant.

This new and charming variety of the Crimson Flowering Currant, is a seedling, raised in Scotland, from *R. sanguineum*, by Mr. David Dick, gardener to the Earl of Selkirk. It is but just introduced into this country, but since, like all the Currant genus, it is very easily propagated by cuttings, we hope speedily to see it in every good collection of shrubs.

The blossoms are larger than those of the single variety, the racemes from three to six inches in length, and the effect of the shrub, when laden, in spring, with these fine pendant blossoms, is very rich and striking. Its flowers open, according to *Paxton's Magazine*, about three weeks later than those of the parent species.

Ribes sanguineum, north of New-York, should be planted in a somewhat shaded situation—on the north side of walls or buildings, or in places where it is partially

* Named in honor of JOHN DEUTZ, sheriff of Amsterdam, and a patron of gardening.

Fig. 99. *The Double Crimson Cereata.*

shaded by evergreens. In such sites, it is perfectly hardy. It is quite likely that this double variety, being a Scotch seedling, will prove perfectly hardy with us in any situation.

III. MR. DOUGLASS' SPIRÆA.

Spiræa douglasii.

A very pretty new species of *Spiræa*, from California, where it was first discovered by DOUGLASS, the botanical collector of the London Horticultural Society. It considerably resembles our native species, *S. tomentosa*, but it blooms a much longer time—indeed, from July till the autumnal frosts commence. The flowers are of “a fine rosy lilac, and are most numerous produced in

Fig. 100. *Spiræa douglasii.*

dense, compact, terminal racemes. We are not aware that this species has yet produced flowers in the United States, as it has only very lately been introduced from the English gardens. It will, no doubt, prove perfectly hardy, and is very easily multiplied by cuttings.

IV. THE TWO-WINGED SILVER BELL TREE.

Halesia diptera.

The common *Halesia*, or Silver Bell tree, (*H. tetraptera*,) is one of the prettiest ornaments of our shrubberies, well known in the spring, by its pendant, pale, bell-like blossoms, and in summer, by its four-winged seeds.

The present species is a much rarer one. Its native country is Georgia and Carolina, but it is hardy here, and is well entitled to a prominent place in the pleasure grounds. It differs very strongly from the common species, in both the larger size, and the purer white, of its flowers, and also in the

foliage, which is twice as broad as that of the four-winged sort. The seeds have, as the name indicates, only *two-winged* appendages.

Though this species is frequently advertised for sale, yet it is rarely found true to name. We received from nurseries at New-York, Philadelphia, and Natchez, a few years ago, a number of plants under this name, but on flowering, they all proved to be the common varieties.

There are two or three fine specimens of the true *Halesia diptera* in the excellent nursery grounds of Mr. WM. REID, at Murray Hill, New-York city, which have strongly excited our admiration, whenever we have seen them in bloom. They blossom in June, three or four weeks later than *H. tetraptera*; the blossoms are large and numerous, and of a pure and snowy whiteness, and remain a good while in flower. Altogether, we consider the two-winged Silver Bell, as a hardy shrub of great beauty, and one that should be large-



Fig. 101. *The Two-winged Silver Bell.*

ly propagated and introduced into every collection. It cannot be very difficult to obtain seeds from the south, and Mr. REID informs us, that this species ripens seeds in the open borders of his grounds.

On the Common System of Pruning Apple Orchards.

BY C. SPRINGER, MEADOW FARM, OHIO.

THE best fruit is generally found among the largest specimens of particular varieties: and the exceptions among such as have grown in the shade. The largest specimens grow on thrifty branches; not more, however, on young trees than old ones which support thrifty shoots. Hence the great importance of judicious pruning, so that the sap may flow into fewer branches, giving them a larger growth—larger leaves and larger fruit.

“Another advantage of pruning, is, to allow free access of sun and air, without which the juices are not perfectly elaborat-

ed, and the fruit never attains its highest flavor. * * *

"In this climate, some varieties of apples, are damaged by smutty spots on the skin, (lichens) which prevent the parts so covered from growing as fast as the rest of the fruit, &c. * * * For this defect the remedy is careful trimming."

The above is extracted from an article in the Ohio Cultivator of March 1st, last, and gives the old doctrine of tree trimming, which has been repeated in every book and every paper, on the subject of trimming "Fruit Trees," which has come under our notice. A doctrine, the correctness of which appears to be taken for granted, in consequence of being so often reinforced, though, we think, without proper examination. And if accident had not satisfied us of its incorrectness, we should, no doubt, have been a believer to this day.

Some sixteen years since, we planted a small orchard of grafted fruit. Expecting to be absent for some years, we left in charge of the man who had the care of our home interest, the most approved pruning knife, with directions how to use it, and an urgent request that pruning itself should not be neglected. But the knife was soon lost, and the trees permitted to grow as nature directed. When we returned to take charge of our orchard, the trees were too far advanced—the limbs too large to be cut and slayed, so they grew as they were wont, "without let or hindrance."

If we understand the doctrine of the above extract, under the circumstances we could look for nothing but small and poorly flavored fruit; but the direct opposite is the fact. We challenge the country to produce larger and better flavored apples. We do not say it boastingly, but for the purpose of gathering instruction, that we have the reputation of

raising the best fruit in the neighborhood, and that too on trees which were never trimmed.

Three years ago, this past autumn, we had about 160 barrels of the largest and finest apples, as the product of about one acre of ground, besides some hundred bushels which had fallen from the trees, which were not marketed, but were used in the shape of sauce, dried apples and cider. The fruit was fair, and free from blemishes; and what was remarkable, the apple crop in this vicinity, the same season, was very imperfect. There were apples enough, but they were small, wormy, and blemished. Our neighbor, J. R. who is a good producer of fruit, informed us that he would not have five barrels of merchantable apples in his orchard that season, owing to the defects here named, yet his trees were trimmed in the ordinary way. The last fall we had about 150 barrels of apples, off the same lot, of superb fruit, and our orchard was freer from the bitter rot, which so greatly afflicted the orchards in this quarter, than any one we noticed.

But do not mistake us to argue that our fruit was thus excellent, simply because our trees were never trimmed. All we mean to say, is, that trimming does not increase either the size or quality of the apples, but that these qualities are to be secured by other means of culture. However, we are now of opinion, that apples will be more perfect on untrimmed trees, all things else being equal, than they will be on trees *trimmed in the ordinary way*. [That is to say badly trimmed.—Ed.]

Our orchard is located on a good specimen of white oak clay soil, which has a tendency to send vegetation more to ear than stalk—trees planted 22 feet apart. The ground was kept in corn for a number of years after they were planted, manuring

the whole surface annually with a heavy coat of manure. For nine years past it has had no other attention than to keep the suckers from the roots of the trees. We fatten our hogs every year upon the lot, which keeps it well manured. It is too rich for some kinds to bear well—for instance the Rhode Island Greening grows less, and bears more plentiful on thinner soil.

With respect to sun and air, as improving the flavor of fruit; this may be true in regard to peaches, grapes, and some others; but in reference to apples, generally, we believe it to be an unsound maxim. We believe that all apples whose defect is too much acidity—and this class is a very considerable one—will be found best which grow in the shade. Take the *Jeneting* of this vicinity, for instance, or the *Rhode Island Greening* alone, and you will find on examination, that such as grow on the tops of the trees, where they have both air and sun, will be coarse and sour, while such as grow on the under limbs, and are protected by the leaves from the sun, have a fine texture and pleasant flavor. We have examined this subject until we are satisfied of the truth of this position, and all we ask, is, that no man condemn the doctrine until he tests it for himself.

As it regards trimming trees, we are now satisfied that it cannot be done to any considerable extent, at any age, without essential injury. We have made a number of experiments to illustrate this subject, one of which we shall here give. We planted two natural pear stocks, and the next year grafted them with Burlingame pear. The first season one grew three feet five inches, and the other two feet five inches. The first threw up a single shoot; the second a fork with two equal branches, which, if they had been tested with the scales, would have

weighed about the same as the single shoot of the other. In the spring of the second year we cut off one of these forks, which, it will be recollected, was about one half the previous year's growth. According to the doctrine in the article before us, "the sap flowing into fewer branches, would give them a larger growth." But the experiment shows a different result. The one which had half its top amputated, grew the second year, just one foot, while the other tree, which remained without trimming, grew three feet. These two trees, about equal in the start, have now had, since grafting, three years' growth, and the trimmed tree is about one-third less than the other. And we have no doubt, from this and similar experiments, that the difference is the sole result of trimming.

If some varieties of fruit trees must, of necessity, be subjected to much pruning to induce them to bear and perfect their fruits, let it be done. But we are satisfied from the best of all teachers,—experience—that this necessity does not exist on the part of apple trees. And so long as we have larger and better apples from untrimmed trees than our neighbors have from trimmed ones, it is not very likely we shall be induced to try the trimming system. Particularly, as much loss of time will be required to subdue the many small sucker-like shoots, when once the trimming process is commenced, for they will trouble you to the end of the race. And as for the sap which formerly supplied an amputated limb, transferring itself to the other branches of the tree, facts teach us that this is not done very readily; but that the natural effect of this lopping-off system is to throw out sucker-like shoots in abundance; and if these be suppressed palsy of the part is to be feared, which in most cases of the amputation of large limbs does

actually take place. The tree then commences rotting at the heart, and hastens to premature decay.

But let us be properly understood upon this subject. We do not go entirely against trimming apple trees. It is only against the *system* of trimming as *commonly* practiced, that we enter our protest. When trees are young, their heads may be formed, and their branches thinned with the pruning knife, but the shoots should be amputated the same season they start, before their physiological arrangement shall have become permanent. But the less carving is done about a tree, the greater will be its growth, and the more perfect its health—and shall I add, the more splendid its fruit.

C. SPRINGER.

Meadow Farm, Ohio, Feb. 3, 1847.

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REMARKS.—The injudicious practice of pruning apple orchards, common in many parts of this country, is justly condemned in the foregoing article. But pruning, properly performed, is of great advantage to most fruit trees. MR. SPRINGER is right that the over-pruning of many apple orchards greatly lessens the crop—but on the other hand, in the case of the peach tree, as has been proved a thousand times, judicious pruning increases the size and quality of the fruit, and doubles the life of the tree.

We find the following excellent and timely remarks on this subject, from the pen of DR. LINDLEY, in a late number of the Gardening journal edited by him, which we extract for the benefit of our readers. ED.

The general principles of pruning, as distinguished from handwork, are few in number, and among the easiest of all things to understand; but their application is manifold, often difficult, and always special. For example, it is an axiom that hard pruning produces barrenness, and that slight pruning leads to productiveness; a second well known law is that the removal of one bud or branch strengthens another; a third law teaches us, that to

stop a branch by cutting away its extremity, compels what is left to produce side branches, which might not have otherwise appeared. Then again, the necessity for using the pruning-knife at all is often obviated by the employment of the finger and thumb; that is to say, a young branch may be prevented from appearing by pinching off its bud as soon as it begins to push, as well as by first allowing it to grow, and then removing it—and better. All these, and all such, facts are plain to the meanest capacity; the difficulty is how to apply them, and when, and where. The answer to such questions is only to be found in experience, and in a very careful examination of the peculiar mode of growth of each species of tree to be operated on. For no two species of tree can be found of which it is the nature to grow, and flower, and fruit, exactly in the same way, and every variation in the manner of growing, flowering, and fruiting, demands a corresponding variation in the mode of applying the principles of pruning.

We know, indeed, of but one general fact which may be, we would rather say should be, invariably attended to, and that is the universal necessity of keeping branches thin. Light in abundance, and the freest circulation of air among leaves, are of vital importance to all plants; but these cannot be secured unless the branches are left thin. A crowd of branches implies a crowd of leaves, and in a crowd leaves can neither breathe nor perspire, nor feed; in fact they are smothered. But when they stand well apart, they breathe freely, perspire profusely, and feed incessantly; the result of which consists in fine strong stiff shoots and dark green fat leaves, instead of spindling twigs and yellow weakened foliage.

It is true that this statement appears at first sight to be opposed to a common physiological axiom that the health of a plant is in proportion to the number of its leaves; because it is probable that a well thinned fruit tree will have much fewer leaves than a plant left to grow wild. But the axiom alluded to is put in inexact words; as our correspondent "W." very properly remarked in last week's paper, it is not the mere number of leaves that determines the health of most plants, but the superficial area of foliage exposed to light and air; a material difference. For example, suppose that one branch has but 10 leaves, the whole area of which shall be expressed by the number 100; and that another branch has 20 leaves, the area of which shall be equal to 120; the inference would not be that the latter would conduce to the health of a plant more than the former, unless it could also be shown that the 20 leaves were each as well lighted and aired as the 10, which in the head of a tree would be improbable. And if the 20 leaves had only an area of 90, it is clear that they would be less effective than the 10 having an area of 100, all other circumstances being equal. Of course we do not mean that a gardener is to calculate the exact superficial contents of a leaf before he can tell whether to remove it or not; we only put the argument into this form for the sake of illustration.

REVIEW.

EUROPEAN AGRICULTURE AND RURAL ECONOMY.

FROM PERSONAL OBSERVATION. By HENRY COLMAN. Boston, A. D. PHELPS & Co. Parts I to VII. (To be completed in ten numbers. \$5.)

WE look upon MR. COLMAN'S mission, as one of the strongest evidences of the zeal and intelligence now enlisted in behalf of agriculture, in the United States. That the mere announcement, that a gentleman devoted to its interest, proposed to make a personal inspection of European Agriculture, and give the results, should so readily have brought forward a list of *twenty-five hundred* subscribers to a work of the kind before us—a work that, in this country of cheap literature, is a somewhat dear work—we consider a substantial evidence of a spirit of inquiry existing among us, that will by-and-by produce its proper results.

There are two points of view, from which we are inclined to consider MR. COLMAN'S mission—the first, as it affects us on the other side of the Atlantic, and the second, as it affects us at home.

Any one who has a glimmering of political sagacity, may see, at a glance, how, in spite of that unfortunate stigma of *repudiation*, (which, like a youthful folly, we trust we shall yet soon recover from,) the importance of our union, in a political, commercial, and agricultural sense has very lately forced itself more profoundly upon the understanding of all clear thinking men abroad. From considering us as a mere liberated colony, a fourth rate nation, mostly living in log houses, and semi-civilized in customs, a few years have obliged Europeans to observe that there is a moral, intelligent, and physical weight in America, which bears hard upon that "balance of power" that has so long kept the old world at the

bottom of every thing wise, and great, and powerful.

This is a desirable state of inter-national opinion for us, and we cannot but think that the presence abroad, of such men as EDWARD EVERETT, LOUIS M'LANE, and HENRY COLMAN, has contributed in no small degree, towards bringing it about. How well and fitly the national character has been represented in England, by our two late ministers at the Court of St. James, is a matter of world-wide notoriety. Now the events of the last two years have drawn the attention of our fellow men on the other side of the Atlantic, to our condition and resources, as an *agricultural* people, no less strongly than in purely political aspects. A country whose vast and productive grain fields hold "the balance of *food*," when famine stares a fourth of the human family in the face, is, in the estimation of sensible men in the nineteenth century, at least as important in its influence on the destinies of the race, as one which, a century ago, could overspread the face of Europe, with the mightiest army, and bring into the world the most overwhelming death and destruction. There is just now, more disposition in Europe to make acquaintance with the merits of Indian corn, than cold steel or leaden bullets; and for the sake of humanity, and the good cause of American Agriculture, we heartily rejoice at it.

MR. COLMAN, we cannot but think, is, on the whole, a worthy representative of our most intelligent agricultural class. He went abroad under the most favorable auspices, his heart full of his subject, and his trunks crammed with the best letters of introduction. He has accordingly enjoyed the best opportunities in Great Britain. He

has been the guest of the most intelligent of the nobility—for there, agricultural knowledge is the pride of the first aristocracy in the kingdom—and has not failed also, to sift, with the ingenuity of a “Massachusetts commissioner,” the *modus operandi* of the humblest practical ditcher. Mr. COLMAN is conversant with the condition and prospective capacities of American agriculture; he has personally a happy way of communicating information; so that we cannot doubt he has cleared up many doubts, removed many prejudices, and left a more favorable impression in that part of Europe, which he has already traversed, of the genius of American agriculture.

Touching the second point of view, in which we consider Mr. COLMAN’S tour, viz: how it affects his readers and countrymen at home, we can of course only give an opinion in part, as his Reports are not yet finished. Only Great Britain has yet received his attention, and we anticipate that lessons even more instructive, will be drawn from the practice of France and Germany—countries more nearly like our own in many points of farming practice.

The eight numbers already published, abound with the most valuable and interesting accounts of the highly improved condition of English husbandry at the present moment. The ample details given on the subjects of *draining* and *sub-soiling*, alone, will, if properly appreciated and put in practice by his countrymen, be worth millions to the country. Those farmers who doubt the wisdom of investing capital in the improvement of their farms, we refer gladly to the account of such experiments as that of Mr. DENNISON, of Yorkshire, who took a barren, sandy and boggy heath of four hundred acres, the best of which previously let for 2s. 6d. per acre, and by draining and sub-soiling it in a scientific manner,

has made it yield a crop of eighty bushels of oats to the acre.

Looking at Mr. COLMAN’S publication, so far, in the light of an interesting contribution to scientific and practical agriculture, we think it deserving of general commendation. Its value will perhaps be better understood and appreciated, here at home, ten years hence, than at the present moment, for the very plain and sufficient reason that the practice and the principles which it displays, are unquestionably in advance of the means, and the amount of previous agricultural knowledge, possessed by many of his readers. Yet we may not safely assert this as true, for any length of time, however true at the present moment, since, watching the progress of these matters, we confess we are often startled at the rapidity with which it strides onward.

In a popular point of view, we are confident that Mr. COLMAN would have been far more successful if he had not given the present work to his original subscribers, but published it in the usual way, or perhaps still more thoroughly digested and matured, a year after his return home. A much more popular, and we think scarcely less useful, publication, would have been produced, if he had given a graphic and lively *Note book of Agricultural Travel in Europe*, to his twenty-five hundred subscribers, leaving the present work to follow after it. There is a vast deal in the agriculture of Great Britain, and we may add in Mr. COLMAN’S account of it, that is of little or no practical value to most American farmers. Some of the latter, little accustomed to solid treatises will, we fear, turn away from Mr. COLMAN’S excellent numbers, as too heavy, or too profound to rouse their attention, while they have been thoroughly interested, and often highly instructed, by such an easy and attractive account as that agreeable writer

could have given, of his daily impressions of the farming of Europe. We make this remark—not as undervaluing in the least, the high character of Mr. COLMAN's labors, but with the deep-rooted conviction of this fact, that bears upon the case; that when practical men are just commencing the study of the science which should direct their daily labors, they must not be treated as patient and trained students, eager to explore the whole temple of science, but rather like cautious and somewhat unwilling candidates, who must be lured into its outer vestibules, by wisdom, conveyed in pleasant and familiar words.

FOREIGN NOTICES.

JAPANESE TASTE IN ARBORICULTURE.—The Japanese gardeners, it is well known, succeed in dwarfing almost every tree. It is said that they select the very smallest seeds, taken from the very smallest plants; two circumstances which are certainly rational and conformable to all the facts known to us in connection with varieties of race. No doubt, indeed, exists about the operation thus far; but the following assertions are much more apocryphal.

It is said that as soon as the plants have germinated, the Japanese cover them with fluid honey, or with dissolved sugar; that they afterwards paint them with a camel's hair pencil, using the same material; and that they afterwards introduce into the little box, which serves as a green house to these marvellous pigmies, a nest of little ants, whose eggs soon hatch and produce an active colony, greedy of sugar, and incessantly running over the plants, which, though alive, have really been converted into a cold preserve. Gardeners know very well that aphides, scale insects, the cocci, and other vegetable leprosies, do in fact torture and distort plants till they are quite disfigured. The everlasting play of these insects, which are always running over every part of the plant, keeps up a peculiar excitement, which ends by producing the state of dwarfness so much admired in that part of the world, at least this is what the Japanese say. The *Fir*, of which Dr. SIEBOLDT spoke as being only three inches high, and growing on the second stage of the box, was the *Pinus massoniana*, the "Wo-matza" of the Japanese, or the "Koksjo" of the Chinese. THUNBERG mistook it for the Scotch Fir. Its history is very curious, and is also given in the "Flora Japonica," p. 25, vol. 2. Of all the conifers, (the pine family,) we found this the commonest, through the whole empire of Japan. In places where it does not grow wild, it has been universally cultivated. It has a great reputation on account of the fables, miraculous stories, and idle tales of all sorts, mixed up with its history, and is a religious symbol in the ceremonies and festivals of the people. The "Wo-matza" and a "Mume" (a sort of plum) are planted before the residence of MIKADO. It forms groves round the temple of the sun-god, of saints, and of holy men; and it overshadows all the little chapels and gardens adjoining the dwelling houses, &c.

On the high road it forms alleys 100 leagues long; and the course of every highway is marked by hillocks planted with this pine, and with species of nettle trees. The art of the Japanese gardener is exhausted in the cultivation of these pines. They are clipped and cut into all sorts of shapes; their branches are spread into fans, or horizontal trellises, and are thus fashioned into a sort of flat dish. In this kind of gardening, extremes are made to touch, and the traveller is astonished to find specimens of an immense size placed by the side of others of the most tiny dimensions. While staying at Phosaka I went to see the celebrated pine tree before the Navi-waja Tea-house, the branches of which are artificially spread out into a circumference of 136 feet. On the other hand, they showed me at Jeddo, a dwarf tree, in a lacquered box with branches not occupying more than 2 square inches! They even know how to graft the pine family in Japan, and we saw dwarfed specimens on which almost every variety of pines known in Japan was fixed by grafting.—*Botanical Register*.

SMEE ON THE POTATO PLANT.—If fine paper, good type, and lithographic plates, with all the formalities of numbered paragraphs, and the advantage of a dedication to Prince Albert, could settle the question of the Potato disease, Mr. Smee's book would be conclusive. But we apprehend that in addition to such auxiliaries, an extensive knowledge of facts, correct judgment, and acquaintance with the nature of all the subjects treated of, and, moreover, the power of drawing just conclusions from ascertained premises, are also indispensable requisites, which we do not find in the work before us. We say so with much regret; but the subject is one of such moment that we are bound to express our opinion without reserve when a work of pretension, written by a Fellow of the Royal Society, enlists itself on the side of the most manifest error.

The opinion of the Author is, that a kind of Aphis, which had been previously called *Rape*, but which he new names *vastator*, has done all the mischief; and thus he joins that small knot of writers among whom it is enough to say that no man of science has before been rash enough to rank himself; writers who are all equally clear as to the potato disease being caused by insects, though

they cannot agree whether those "insects" are mites, worms! or grubs, flies, perfect or imperfect, Thrips or Eupteryx or Aphis.

We have read Mr. Smee's book with care; we have endeavored to make out his argument, and to do justice to his evidence, and we can only express our wonder that he should not have perceived how inconsistent even with his own knowledge of facts is this insect theory. For what are the grounds on which he has founded his opinion? Firstly, that the aphid is found on the potato plant; 2dly, that it multiplies very fast; 3dly, that it punctures the leaves; 4thly, that it fills the air with its myriads, and is found even in the streets of London; 5thly, that where the insect has damaged the leaf of a plant, it (the leaf) is much influenced by wet weather; 6thly, that the first appearance of the disease in a healthy and previously undamaged plant is always subsequent to the visit of the destroyer; and the amount of disease, *ceteris paribus*, is directly proportionate to the number of insects which take away the vital fluid of the plant."

We may very well concede the three first propositions; they are well known to be true. The fourth is a mere local fact; for we cannot suppose Mr. Smee to assert that myriads of Aphides are found over every potato field; if it were so, we and others must have been very unfortunate not to perceive them. The fifth is a strong assertion, in support of which we cannot discover a trace of evidence; and it might be disposed of by a counter assertion, that "when the leaf of a plant is injured by aphides, the leaf is less influenced than before by wet weather." We do not, however, deny that the punctures of aphides may be in some degree affected by wet weather; but how?—by a general destruction of vitality?—by broad blotches on the foliage?—by inducing moist gangrene in the whole system?—who ever heard of such a thing! Aphides cause swellings and a thickening of tissue, as may be seen in the Potato as well as other plants; and when they do exist in the myriads which are talked of, trees will sometimes cast their leaves, because the stem which bears them is exhausted by the aphides of the organizable matter which feeds the leaves; but such cases have no concern with the "potato disease." The sixth proposition is certainly not admissible; it is directly in the teeth of facts which we are all familiar with. Our own potatoes were as much diseased as any crops near London; yet we saw no aphides prior to the appearance of the injury, except a straggler here and there, such as could have been found any year within our recollection.

Does this aphid notion explain how potatoes, sprouted in sand, in 1845, and which never got above ground, became diseased? How potato-fields screened by trees or strips of other crops, were saved as far as the influence of the screen extended, while all around them perished? How all the Isle of Calf potatoes escaped in 1845, except the patches belonging to the lighthouse keepers? and finally, how in certain countries the disease was unknown except in localities planted with foreign potatoes? What could have kept

these winged creatures from flying to the neighboring fields and biting them?

We must not, however, part with this book without an example or two of the author's mode of reasoning. He says—

"When the insect has damaged the leaf of the plant, it is much influenced by wet weather: a shower of rain will fill the stems with water; and in consequence of the solid portion having been taken away by the insect, the moisture cannot cause the rapid growth of the plant which should take place under such circumstances."

We were not previously aware that aphides fed on solid matter; we had always understood that their food was the fluid matter of plants. Again—

"This vasterator does not commit the same amount of mischief upon every kind of potato. It dislikes those leaves where moisture is to be found on the under surface in the morning; and thus, according to the state of the plant, it passes over with greater or less rapidity."

Here is certainly a very remarkable discovery. It appears that there are some kinds of potatoes which deposit water on the under side of their leaves during the night, and other kinds that have no such power! Perhaps Mr. Smee can find some kinds of men who perspire by their skin, and others who do not. Until this is shown we must be permitted to adhere to the vulgar opinion that the vital actions of all kinds of potatoes are essentially the same.

But we would rather not go on. Let us rather advise all who are ambitious of figuring in the potato discussion to qualify themselves, in the first instance, by an attentive study of the writings of such men as Decaisne, Harting, and Payen, in addition to the well-ascertained facts that may be gathered from the published documents of this country.—*Lindley. Gard. Chron.*

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THE LINNÆAN GOLD MEDAL.—To the President and Council of the Linnæan Society, London, there is left, under the will of the late Mr. Edward Rudge, of Abbey Manor-house, Evesham, Worcester, a magistrate and justice of the peace for that county and Middlesex, a bequest of £200, the annual interest to be laid out in the purchase of gold medals, to be called the "Linnæan Medals," and to be awarded by the president and council to the Fellow of the Society who shall write the best communication in each volume, and which shall be published by the Society, in either of the four departments of natural history. Each gold medal to contain on one side a profile bust of Linnæus in his full dress, encircled by his name and the dates of his birth and death. On the obverse is to be engraved the name of the Fellow of the Society to whom such medal is awarded, encircled by a wreath of the *Linnæan Borealis*.—*English Paper.*

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L'Echo du monde savant, contains a notice of a *Manuel tres interessant*, by M. LOUIS DUPONT, in which it states the author demonstrates, logically and philosophically, the possibility: 1st, of causing long continued rain storms to cease: 2d, of

preventing long drouths, by bringing about seasonable rains, thereby rendering the earth more productive." We hope this new French weather philosopher, who, we are told, is an "ancien chef d'établissement d'instruction," will prove more successful as a storm king, than our PROFESSOR ESQY.

In the same journal is stated an interesting fact, regarding the culture and manufacture of the *Sugar Beet*,—at present so important a matter in France. A sugar house recently established in Galicia, has manufactured the past year, 15,000,000 kilogrammes of sugar, and the opinion is given, that such is the progress made in this manufacture, that, in a few years more, no foreign sugars will be needed, at least in France. It has been found, that by drying the beet root, at that stage when it contains most sugar, it may be preserved without any saccharine loss for years; the sugar may then be extracted at leisure, and at much less cost. The small cultivators can cut up their beet roots into slices and threads, dry them, and keep them in a store room or granary, and not be obliged to carry them to the manufactory till most convenient to themselves. The remains of the dried Beet root, after the sugar is taken from it, is eaten by animals almost as greedily as though it had not been dried beforehand.

THE WINTER GARDENS OF BERLIN.—The following brief account of the celebrated Public Gardens of Berlin, is translated from the *Journal des Debates*, by the Boston Daily Advertiser. How much of hearty health and enjoyment might be realized through public gardens in our large cities, by a small annual contribution from all the property holders.—ED.

"There exist at Berlin vast places of assembling, called, according to the season, Winter Gardens, or Summer Gardens. Fifteen hundred persons meet there, either under the shade of trees, or in immense halls adorned with flowers and shrubs. These crowds meet without tumult and enjoy pleasure without noise, without scandal, and without police officers. All the citizens of Berlin congregate there. Mothers come there with their daughters, and embroider, talk, knit and sip their coffee. Often the whole household sups there. The men, who are all uncovered, some smoking, others drinking beer from immense glasses, which hold more than a fourth of a bottle. Orchestras occupy a point of the hall; each establishment has its own; they are led by directors, who, baton in hand, rival each other in talent and glory. Listen—harmony, precision, common qualities, power, docility, expression, richness, artistical nerve, profound sentiment, unconquerable energy, enthusiasm, exaltation, every thing is found in these orchestras. The harmony which they give out, flies, bursts forth, triumphs and escapes, returns, roars like the tempest, moans like the gentlest breeze, moves like a plaintive sigh, bursts out at last, is lost in a mysterious distance. The crowd, attentive, mute, motionless, still continues to listen, as if retaining, tasting its impressions. Then their transports are expressed, but with silence; the master bows—they would have understood each other without these marks of intelligence. This is the effect of

music at Berlin, when the people form the auditory, and the musicians are in the open air. At half-past nine in the evening every body has returned home."

CONSTANTINOPLE, OCT. 26, 1846.—The ornamental Gardens are either within the town and suburbs, or behind the imperial or private palaces along the shores of the Bosphorus, and many of the latter extending to the brow of the hills behind the houses. The true Turkish gardens, taking as models those of the Seraglio, which are well kept up, and of some other Turkish palaces—are in some respects rather yards than what we should call gardens, being individually of no great extent, rectangular, and surrounded by walls or buildings; a kind of green-house often occupies one side for putting the oranges and other tender shrubs into in winter, and the other walls often covered with creepers, very frequently the Virginian creeper, two or three Jessamines, Tecomas, &c.; the area is divided into a great number of little beds symmetrically arranged, though often of fanciful shapes, edged with Box, and each containing a few plants, generally old and common things, but in the best gardens so contrived as to have as many as possible always in flower. Those now showing forth are chiefly Dahlias, African Marigolds, and common China Roses. Along the principal walks are often taller shrubs or fruit trees trimmed to as narrow a pyramidal form as possible. The walks are either a kind of gravel composed chiefly of broken shells, like what was laid down a few years since in St. James's Park, or paved with pebble stones in diamond-shaped patterns. Yet, however confined and crowded these gardens may be (I have seen many with the walks and beds scarcely 18 inches broad,) they are many of them so neatly kept, and the plants so vigorous and full of flower, owing to the fine climate and good care in watering, as to have a very pretty effect. In one of the Seraglio gardens, the walks are paved with flag stones instead of pebbles, and the beds edged with thin stones placed on edge, and yet it looked as green and as gay as any. I cannot but think that the paving the walks is very beneficial under a hot sun, as it prevents the roots from burning, and the ground from caking after being watered. Like the vineyard in the neighborhood of Montpellier, which the owner paved with flag-stones, and got beautiful crops, till his neighbors laughed him out of persisting in a practice unknown to their ancestors.

The garden or the palace of Tcheragan, on the Bosphorus, where the Sultan at present resides, is said to be the most beautiful here, and is under the management of a German now absent. I have been disappointed in the hopes that were given me of going over it; but from what I hear, and from what one can see looking in at the gates from the Bosphorus, it appears to be a combination of the Turkish and modern European garden. The front of the palace, though only of wood (as almost all the palaces,) is the richest and most elegant thing of the kind I have seen, and in the flat behind appears to be a formal garden, full of small beds, shrubs, flowering plants, &c.; with fountains

and basins, and green-houses, arranged in architectural symmetry with other parts of the building. The high hill behind is partly laid out in shrubbery, partly covered with Stone Pines, Cypressess, and other trees, with winding walks, and attempts at lawns in the style called on the Continent *à l'Anglaise*. These gardens altogether are said to contain a great variety of ornamental shrubs and plants, the Sultan being very anxious to have every thing *à l'Européenne*. The Imperial Botanic Garden is within the college of Galata-Seraï, in Para, and is under the direction of Mr. Noe. It is small, but neatly kept, well supplied with water; and though quite new, contains about 1500 species arranged according to the Natural System, and affords specimens of most of the large natural orders. Mr. Noe, by desire of the Sultan, is endeavoring especially to collect as many as possible of the interesting Turkish plants. The private gardens, with their Stone Pines and Cypressess, are one of the great elements of beauty on the bold and varied shores of the Bosphorus. Those on the European side are not often of great extent, but are rendered more picturesque by the kind of houses amongst which they are situated. On the Asiatic side, where there is not so much building, there are often extensive grounds or woods. It is on that side (and especially towards the western end,) chiefly on account of the more abundant supply, that most of the flower gardens are situated for the supply of the town. I have had but little opportunity of seeing them; but in the streets of Pera, Moss and Cabbage Roses (*R. centifolia*), and very fine Pinks, are now selling very cheap, and we are told that this second season for them is but just begun.

DR. SPRENGEL'S HERBARIUM.—We understand that the heirs of this celebrated botanist are desirous of selling his herbarium. It is represented to consist of 21,800 species (without reckoning the numerous sub-species and varieties) in the best order, and arranged after C. Sprengel's System a vegetabilium, with an exact catalogue written by himself. It comprises unique duplicates of the herbarium of John Reynold Forster, the companion of Captain Cook, (of 800 species,) the rich presents of the East India Company, and almost all the collections of travelling botanists which were sold in the first third of this century. The price is 200*l.*, as we learn from his son, Dr. Anthony Sprengel, of Halle, in Prussia.—*Gard. Chron.*

THE TEIN-CHING, OR CHINESE INDIGO.—When in the north of China, my attention was directed to a plant largely cultivated by the inhabitants for the sake of its blue dye. In the southern provinces a considerable quantity of indigo (*Indigofera*) is cultivated and manufactured, besides a large portion which is imported from Manilla and the Straits. In the north, however, the plant which we call indigo is never met with—owing, I suppose, to the coldness of the winters—but its place is supplied by this *Isatis indigotica*, or the "*Tein-ching*," as it is called by the Chinese. I met with it in the Nanking cotton district, a few miles west of Shanghai, where it is considered a plant of great

importance, and covers a large tract of country. It is grown in rows, a few inches apart, and at a distance looks like a field of young turnips or cabbage plants. In June, 1844, when I was in that country, the plants were from six inches to one foot in height, and being considered in perfection, the natives were busily employed in cutting them, and removing them to the manufactory. One of these places which I inspected was close on the banks of the canal, and was placed there for the convenience of the farmers, who brought their leaves in boats from the surrounding country, as well as to be near the water, a large quantity of which was requisite in the manufacture. It consisted of a number of round tanks, which are built for the purpose of steeping the leaves. The leaves are thrown into the tanks and covered with water, and, after remaining a certain length of time, the juice is drawn off into other tanks, where I believe it is mixed with lime. The color of the liquid at first is a kind of greenish blue, but after being well stirred up and exposed to the air, it becomes much darker, and very like the well-known indigo of commerce. I suppose it is thickened afterwards by evaporation in some way, but that part of the process did not come under my observation. I am very much inclined to believe that this is the dye used to color the green teas which are manufactured in the north of China for the English and American markets; this, however, is only conjecture. The plant has a half-shrubby stem, covered with a fine bloom. Its root-leaves are oval-lanceolate, on long stalks, sharp pointed, slightly toothed, and somewhat fleshy; those on the upper part of the stem, near the flowers, are linear. The stem is decumbent, a foot and a half long, and divided at its extremity into several drooping racemes about six inches long; on its sides it bears here and there small clusters of leaves like those of the root. Flowers very small, yellow. Sili-cles black, quite smooth, six lines long by two wide in the broadest part, oblong, obtuse at each end, a little contracted below the middle, with a thin edge and a single median line.—*Fortune, in Journal of the Horticultural Society.*

HOYA IMPERIALIS. Imperial Hoya. *Store Climber*. (Asclepiads.) Borneo. In the possession of Mr. Lowe, of Clapton. This is the most noble climbing plant we have ever seen. Imagine a true Hoya, with woolly stems, leaves six inches long, and clusters of the most magnificent flowers forming a diadem of ten rays; each flower fully three inches in diameter, and with the delicate texture of the common Hoya *carnosa*, and you will have some notion of this superb species. In Mr. Lowe's letter from Sarawak, dated January 12, 1846, we have the following account of its discovery. "On the next day, when in the territory of the Gumbang Dyaks, I found another curious plant belonging to Asclepiads; it is an epiphytal climber; there was but one individual, growing from the decayed part of a tree, also overhanging the river. The flowers are large and in umbels; the leaves are leathery; and the stem abounds in a white, perhaps acrid juice. The contrast between the purple of the petals, and the ivory white of the

parts of fructification, renders it highly beautiful." This species is certainly new, unless it should be the *Asplenium sarsenoti* of Roxburgh, a Moluccan plant, said to have flowers nearly three inches in diameter; but that botanist cites, without any doubt, the *Commelina radialis* of Rumphius, which has flowers only as large as a shilling (denarius,) and therefore cannot be the species now described. Neither can this be the *Hoya speciosa* of Decaisne, which has the flowers velvety inside, and only one inch and three quarters across; nor the *Hoya grandiflora* of Blume, which has leaves woolly beneath. These glorious species are still to be imported, one from Java, the other from Amboyna, and either would form an invaluable addition to our gardens.—*Botanical Register*.

CYPRIPEDIUM LIPAEANUM. Irapean Lady's Slipper, or Pelican flower. *Greenhouse herbaceous plant*. (Orchids.) Mexico. A noble species, looking like a gigantic form of the downy yellow Lady's Slipper (*C. pubescens*) of the United States. In soil and potting, it requires the same treatment as our common English and American species, but it is more tender than they are, and must be kept in a warm greenhouse. During the summer months, when it makes its growth and flowers, it requires a liberal supply of water. When the growth is perfected, and the stems have died down, the plant must have its season of rest, and at this period it should be kept rather dry. In the summer months, when growing, it should always be shaded from bright sunshine. It is propagated by dividing the roots when the plant is in a state of rest.—*Botanical Register*.

LILIUM SANGUINEUM. Blood-red Lily. *Half-hardy Bulb*. (Lilyworts.) Japan? A plant remarkable for its dwarfness, not growing more than 12 to 18 inches high, and for the vivid color of its large solitary orange-red flower. It might be supposed to be a variety of *L. thunbergianum*, but that plant has a tall hairy stem bearing several flowers of a larger size, with much shorter stamens, and a less brilliant color. The divisions of the flower are, moreover, very distinctly stalked, which brings the species nearer to *L. philadelphicum*, from which it is clearly distinguished by its upper leaves not being distinctly verticillate, and by its great woolly honey-furrow. It grows freely in light loamy or peaty soil, to which has been added a small portion of well decomposed cow-dung or leaf mould. The bulbs, like those of the other kinds of Lilly, always suffer when disturbed, and should therefore only be entirely removed from the soil when an increase is wanted. It is easily increased, either by parting the old bulbs or by the scales, each scale forming a plant, but then they require two or three years before they bloom. It flowers in May or June, and was presented to the Society by Mr. Groom.—*Botanical Register*.

ON THE DURATION OF WOODS, AND MEANS OF PROLONGING IT.—The following are the results of experiments made with great care and patience by M. G. L. Hartig:—Pieces of wood of various kinds, 2 5-8 inches square, were buried about an inch below the surface of the ground, and they became decayed in the following order:—The Lime, American Birch, Alder, and the Trembling-leaved Poplar, in 3 years; the common Willow, Horse Chestnut, and Plane, in 4 years; the Maple, Red Beech, and common Birch, in 5 years; the Elm, Ash, Hornbeam, and Lombardy Poplar, in 7 years; the Robinia, Oak, Scotch Fir, Weymouth Pine, and Silver Fir, were only decayed to the depth of half an inch in 7 years; the Larch, common Juniper, Red Cedar, (*Juniperus virginiana*), and Arbor-vitæ, at the end of the last-mentioned period remained uninjured. The duration of the respective woods depends greatly on their age and quality, specimens from young trees decaying much quicker than those from sound old trees; and, when well seasoned, they last much longer than when buried in an unseasoned state. In experiments with the woods cut into thin boards, decay proceeded in the following order, commencing with the most perishable:—

- | | |
|-------------------|------------------------|
| 1 Plane, | 10 Maple, |
| 2 Horse Chestnut, | 11 Silver Fir, |
| 3 Lime, | 12 Scotch Fir, |
| 4 Poplar, | 13 Elm, |
| 5 American Birch, | 14 Weymouth Pine, |
| 6 Red Beech, | 15 Larch, |
| 7 Hornbeam, | 16 Robinia, or Locust, |
| 8 Alder, | 17 Oak. |
| 9 Ash, | |

It has been proved by repeated experiments that the best mode of prolonging the duration of wood is to char it, and then pay it over with three or four coats of pitch. But simply charring the wood was of very little utility, as were likewise saturations with various salts, acids, &c.—*Hartig, Revue Horticole*.

BEE T-ROOT BREAD.—Take one stone of Beet-root, boil it until it becomes quite soft, pound or mash it fine, (just as turnips are mashed for table,) then add one stone (or equal parts) of wheat flour, and bake with yeast, in the same way as bakers do wheat or common flour bread. The same process will answer for making bread from a mixture of flour with Parsnips, or with White Belgian carrots. I also wish to state that the above mixture and mode of baking will do equally well for making griddle bread, which is important to all those who possess ovens, and that the addition of half an ounce of bread soda to 14 pounds (or one stone) of mixed Beet-root and flour, will answer the same purpose as yeast does, in making the common bakers' bread, light, wholesome, and nutritious.—*T. O'Brien, Baker, Dublin*.

DOMESTIC NOTICES.

HORTICULTURAL NOTES.—*The Pratt Pear* was first brought into notice, by OWEN MASON, Esq., of Providence, R. I. He obtained scions from the original tree, now standing in Scituate, R. I., and distributed them among his friends, in the spring of 1844.

Seedling pear trees, five months old, sometimes die of blight, in all respects similar to the "*Frozen-sap blight*." [The loss of seedling pear trees, so common the first winter, from the seed bud—especially if thrifty and full of sap, is owing to this blight, and there is no hardy tree, we are convinced, so tender and susceptible to cold, in its bark, as the pear.—Ed.]

I have lost many pear trees by heading down close in the spring. The tree appears to flourish the first season thereafter, but frequently dies in the spring succeeding. My practice, in heading back for grafting large trees, is to alter only a part of the tree each year, and never to remove any of the suckers, ["robbers," *i. e.* shoots thrown out below the graft—Ed.] the same year that they are thrown out. When the latter practice is followed, it is almost sure death to the tree. I always commence altering a tree, of any kind, at the top and centre of its head, leaving the lowest branches for the last year's operation. If the lower limbs are grafted first, the centre is thrown up still higher, and the tree is not disposed to form a round spreading top.

In certain localities there are worn out or decayed varieties of fruit. No cultivation, however high, can, I think, restore them; time may: the cause of failure being unknown. There are large trees of the *White Doyenne* and *St. Germain* pears in New England, with their tops grafted with the *Bartlett*, which produce large, fair, perfect fruit; while the lower branches, not re-grafted, produce worthless fruit. How can this be accounted for, and what has cultivation or neglect to do with either, that could not equally affect both?

[We conceive it to be accounted for in this way. The *White Doyenne*, once healthy and thrifty, in R. I., has probably exhausted from the soil, some element necessary to its vigor, and it no longer makes the strong and vigorous shoots and foliage, so necessary to the perfecting of fine fruit. By grafting the head of such a tree with the *Bartlett*, one of the most vigorous and hardy of all pears; this latter variety being able to make luxuriant growth and produce large leaves, on the most indifferent stock, of course matures perfect fruit on its own strong shoots, while it can exercise little or no influence on the remaining ungrafted branches of the tree.—Ed.]

In seeding down a lawn, Red-top and White Clover, have been often recommended. Red-top, such as is sold by seedsmen in New-England, has no after growth, when cut for hay; while clover is uncertain in its growth, but beautiful when in perfection.

Bent grass, Rhode Island Bent, Improved Rhode

Island Red-top, or Borden's grass, known to seedsmen in New-England, by these names, having the appearance of Red-top, but much smaller, is of all grass best suited to a lawn in the northern states. [This is what is called Red-top in this state. Ed.] It is short, thick, and fine, and it endures for years. All our natural pastures stock themselves with it, together with the *sweet-scented vernal grass*, which, "as often as it is new mown, sends forth a sweet and healthful odor."

I give the following *select list of apples*:

1. *Rhode Island Greening*: first for health of tree, bearing, keeping and cooking.

2. *Baldwin*: good for bearing, table and keeping.

3. *Roxbury Russet*: good for bearing and keeping.

All the winter apples raised in New-England, are not collectively, worth as much as the above three kinds. I have grown and tested one hundred and fifty kinds, and am brought to this result. Very respectfully yours, *Stephen H. Smith. Smithfield, R. I., Feb. 8, 1847.*

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A LETTER FROM MR. LONGWORTH.—*Dear Sir*: I very willingly send you some information in relation to the manner in which I cultivate the *Cactus*, of which you have heard, from those who have seen my plants, such favorable accounts. The *Cactus* is my favorite plant, and I cultivate a great variety. When I began, I cultivated both them, and the *Hoya carnosa*, "*secundum artem*," as directed by English writers. The result was, in five or six years, a plant of the *Cactus grandiflora*, would be two or three feet high, and bear from one to three blossoms. The *Hoya* would scarcely attain the same size. They were planted in tubs and pots, with a plentiful admixture of "lime rubbish," "brick dust," &c., according to the stereotyped formulas; and treated worse than our temperance folks, for they are allowed a plenty of water at all times. I now plant them in *rich soil*, and when in a *growing state*, give them a liberal supply of water. They now grow more in one season, than they did previously in six. In a tub, a single plant of the *Cactus grandiflora*, in my collection, last season, had *forty-two blossoms open at a time*, and blossomed several evenings through the season. The *Wax-plant*, or *Hoya*, now runs in three or four seasons, twenty feet, and produces flowers in abundance. These are facts.

But we are descendants of your eastern pilgrims, and possessed of their habits, and occasionally enlarge a little. I fear this is the case, in our accounts of the yearly produce of our vineyards. I believe it is placed at "four hundred or five hundred gallons to the acre," for which, read two hundred. But this is not as far from the truth, as a recent account of the grass crop in Scotland. My memory does not serve me, whether it was nine, or fourteen crops in a season. Nor is it so marvelous,

as the doctrine of most writers, that all our fine apples are produced from the wild crab. In Ohio, Kentucky, and other western states, the wild crab has flourished and been re-produced from seed for thousands of years; and there were, and still are, large natural orchards of them. If this theory be true, why is it, that amidst our millions of new seedlings, no improvement in the quality of the fruit is to be found? Is it, for the sage reason given me by a scientific horticulturist, that in one case, "the seed is sown by the wind, and covered by the rain," and in the other, "planted by man, with the object to improve the fruit;" or the reason given by another, that "to improve fruit, you must sow the seed of the defective fruit, from the extreme end of the branches, and that Providence is not aware of the fact, and makes no selection."

Regarding your assertion, that "the Boston nectarine was produced from a Peach stone." Is it not strange, if this be true, that in raising millions of peach trees from the stone, the only one changed to a nectarine, should have been the Boston. When you will believe on much stronger evidence than can be produced in the case of the nectarine, that I raised three kinds of forest trees, from three apricot stones, I will believe the day of miracles has returned, under-write all Professor BUSH may publish on mesmerism, and no longer dispute the Boston nectarine story. I obtained three apricot stones from Mexico, and planted them in a small pot, in a triangular form, and placed the pot in a hot bed. The soil was taken from my garden. In a few days there came up in the pot, similarly located, three forest trees, and none other. I transplanted them into larger pots, and when of proper size, into the open ground. I kept the trees till they were seven or eight feet high, and intelligent botanists assured me they were trees unknown in this region. Can you produce as strong evidence that the Boston nectarine came from a peach stone? It seems strange to me, that the evidence in the case of the Boston nectarine, could be viewed as even raising a presumption, that it was produced from a peach stone. By a close examination, the nectarine tree can be readily distinguished from the peach tree. Yours with regard, *N. Longworth. Cincinnati, Jan. 30, 1847.*

P. S.—I claim that we people of the west, have some right to know more of certain matters and things, than the wise men of the east. We now have a society of intelligent men, who hold daily intercourse with the celestial world.

REMARKS.—Our friend, MR. LONGWORTH, is a "terrible unbeliever" in all matters that run counter to his own experience. The "Nectarine story," to which he refers, is the account of the origin of the Boston nectarine, in our first number, by S. G. PERKINS, Esq., of Boston. But there is nothing really strange or novel in this matter of the specific identity of the Peach and Nectarine. We have heard of other instances of a peach stone producing a nectarine in this country, and there is an example now standing in a garden within half a mile of our residence.

The following extract from LONDON'S *Encyclopedia of Gardening*, page 906, will show that this

fact has for a long time been well understood in Europe.

"There are various instances on record, (see Gard. Mag., vol. 1, p. 471,) of both fruits (peach and nectarine) growing on the same tree, even on the same branch; and one case has occurred, of a single fruit partaking of the nature of both, (Gard. Mag., vol. iv, p. 53.) The French consider them as one fruit, arranging them in four divisions; the *pêches*, or free-stone peaches; the *pêches lisses*, free stone nectarine, or free stone smooth peaches; the *pavies*, or cling-stone peaches; and the *brugnons*, cling nectarines, or cling-stone smooth peaches."

In other words, the French consider the nectarine only a smooth skinned variety of the peach, (*pêches lisses*, being literally smooth-peach.)

Touching the improvement of fruits, our correspondent must remember that it is a law of the vegetable kingdom, that a wild species, in its natural state, has no tendency to vary, and its seed will therefore probably re-produce the same forever. When, however, a species of wild fruit is "domesticated" by garden culture, some of its seedlings—perhaps at first only one in a thousand—will show a tendency to vary, and it is on planting the seeds of the plant showing this tendency, that the career of the "improvement of races" begins.

The wild crab, to which MR. LONGWORTH refers, as having re-produced itself for thousands of years, in Ohio and Kentucky, is not the wild crab from whence our apples sprung, (*Pyrus malus*), since the latter is not a native of North America. The natural orchards of "wild crabs" referred to, we suppose are the native species, *P. coronaria*. As this species has never been domesticated, or reproduced twice in succession, to our knowledge, from seeds grown in gardens, of course there is little or no appearance in its seedlings, of improvement or departure from the original form of the species. As twenty-two varieties of apples were known in Pliny's time, it is evident that the first variation from the wild crab of the other hemisphere, must have commenced about two thousand years ago; and remembering this, we cannot be astonished at the results attained in this day. ED.

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SUPERB COLLECTION OF CAMELLIAS.—We have rarely feasted our eyes with more floral delight than during a late visit to the conservatory of N. J. BECAR, Esq., Atlantic street, Brooklyn. MR. BECAR's taste leads him to devote his range of glass almost wholly to Camellias, and his collection, it is well known to connoisseurs, is not surpassed by any other in America—though as it is entirely private, it is comparatively little known to the public generally.

Nothing is so satisfactory as to see any one thing perfectly done, and we may safely bestow this high praise on MR. BECAR's superb Camellia collection. It not only embraces every rare and beautiful species that could be procured from the collections of Europe or this country, but the plants are cultivated in a faultless manner, and the specimens of many of the varieties are not only exceedingly large, but display a symmetry of form and a size and beauty of blossom very seldom seen.

The range of glass occupied by this collection is about 100 feet long—square-roofed and divided into three compartments, the larger or central one being filled with noble specimens 10 or 12 feet high, which are finely developed on every side and loaded with immense flowers, certainly double the size of those usually seen in green-houses. Among these large and finely grown plants, we observed a very grand specimen of *Chandler's Elegans*, bending under the weight of blossoms, some of which we measured and found them four and five inches across. *Floy's Powhatan*, 10 feet high, was remarkable for the pendant habit of its shoots and the deep-red color of its flowers. One of the finest plants of the old *Double White*, that we ever beheld, graced one end of this house. It was about 10 feet high, and the diameter of the head 8 feet—and as finely shaped as a linden that had grown in an open lawn. It exhibited, in January, the beautiful spectacle of 120 fine flowers open at once upon its branches. We also noticed among the large specimens two or three of that fine old variety *C. speciosa* in very great perfection.

We have not room for a detailed account of the gems of this fine camellia house. We will notice, however, *C. Albertii*, with several fine blooms, beautifully striped like carnations; *Sacco-nova*, finely shaped, with delicately varied petals of an exquisite peach blossom color; *Leana superba*, deep red, with very rich petals. GILESII, full of blossoms, remarkable for the rich wax-like texture of their parti-colored petals; and *Donclaris*, with immense blooms, semi-double, but very showy.

Mr. BECAR has raised a great many seedlings, but only one was in bloom at the time of our visit. *C. Brookliana*, a finely shaped, rose-colored flower, of much beauty. Another seedling was just expanding a bud of a delicate flesh color and full of promise.

The exceeding health of the plants, and the unusually large size of their blossoms, led us to inquire of the intelligent gardener, Mr. Quin, what peculiarity of soil or treatment was adopted. He informed us that he was not conscious of any except that a larger proportion of fresh or maiden loam, was used than is common in growing the Camellia.

Among the few choice plants which Mr. BECAR allows to occupy a very limited portion of his Camellia range, we noticed those charming orchideous plants, *Cypripedium insigne* and *Zygopetalum speciosum*, both in full bloom.

Mr. BECAR'S grounds are in that part of the city called South Brooklyn, and enjoy the finest exposure and abundance of sun and air. We know no private collection of any one tribe of plants in America, which on the whole surpasses this admirable collection of Camellias.

TREATMENT OF ORANGE TREES IN POTS.—Sir: I should be glad of some information respecting the treatment of tropical fruits in the Horticulturist. I have some Lemon trees which look healthy and flourish very well, but do not bear

abundantly; also plants of the Citron and Orange which bloom every spring profusely. Still but little fruit sets, and the latter drops when about the size of a filbert. Any information regarding their culture will be gratefully received. Respectfully,
Mary E. Fisher. Warrenton, Va.

[The most common error in growing the Orange tribe in pots, is that of allowing them no season of rest—i. e., keeping them in a high temperature, and abundantly supplied with water in winter. The consequence of this is, the plants become too much enfeebled to carry good crops of fruit. In its native country, the Orange has a cold season, when, for six weeks or two months, it is quite dormant. This hint should be followed in cultivation when fine fruit is desired. During the winter, the cooler the plants can be kept, so as to avoid frost, the better. No more water should be given than just enough to prevent the earth from becoming absolutely dry. In this way they will remain nearly dormant till towards spring. As soon as they begin to grow, in the spring, supply them plentifully with water, and thin out at least half the blossom buds before they expand. You will then have a fine crop of fruit.]

Orange trees in tubs should be thoroughly drained, by putting at the bottom of the tub, at least three inches of clinkers and pieces of charcoal over the holes made to allow the escape of water. This and the use of compost composed of equal parts of good fresh loam (made of rotted sods from an old pasture) and decayed hot-bed manure, will enable any one to grow Oranges, Lemons, &c., in fine perfection.—ED.]

HISTORY OF THE TYSON PEAR.—The origin of this very delicious new native pear, which some consider as fine as the Seckel, and which the President of the Massachusetts Horticultural Society, in a note lately received from him, informs us that he considers "nearly or quite on a par with that delicious fruit the *Fondante d'Automne*," has hitherto been involved in some obscurity. We have therefore great pleasure in laying before our Pomological readers the following authentic account from our obliging correspondent DR. BRINKLE, of Philadelphia.—ED.

Dear Sir:—In the description of the *Tyson Pear*, contained in Hovey's Magazine for last November, the writer says, "the precise origin of the *Tyson* is we believe unknown."

As this pear is likely to become a favorite, it is perhaps, desirable that its precise origin should be known. I now furnish you with this information, which I also recently communicated to Col. WILDER, President of the Massachusetts Horticultural Society. I presume there can be no impropriety in your making any use of it you may think proper.

The only catalogue in which I could find the *Tyson* pear, after I became acquainted with its existence, was that of Mr. THOS. HANCOCK, of Burlington. I immediately ordered it, and requested from Mr. H. all the information in relation to it which he possessed. He replied, that he had ob-

tained the sermons in 1837, of Mr. JONATHAN TYSON, Jr., an elderly gentleman, residing a mile beyond Jenkintown. Mr. Hancock kindly offered to accompany me to Mr. Tyson's; but unfortunately, his subsequent engagements prevented his doing so. On the 20th ult., I made the contemplated visit in company with Mr. ROBT. BUIST, of this city. We had the pleasure of finding Mr. Tyson at home, saw the original tree, and obtained the following satisfactory information in relation to it.

The *Tyson Pear* originated with Mr. JONATHAN TYSON, deceased, of Jenkintown. It sprang up in a hedge; and in 1794 was removed from the hedge and planted out; it being then about an inch in diameter. His son, the present JONATHAN TYSON, Jr., was desirous of grafting the *Catharine Pear* on it; but the father objected to this course, alleging that it might be a better kind than the *Catharine*. It continued to flourish, and in a few years it bore three pears. The fruit proved so fine, that a number of trees were grafted from it in 1800. Several of these trees we saw; they were large and flourishing. We were also shown two trees that had been suckers from the root of the original tree, and are now nearly fifty years old; they likewise were large, healthy, fine looking trees. The fact, that these two trees bear precisely the same kind of fruit as the original, is conclusive evidence that the latter was a seedling that had not been grafted. The original tree is still standing in the yard of a house in the village of Jenkintown. Mr. Buist and myself measured this tree two feet above the ground, and found it six feet in circumference. Very truly, yours, *W. D. Brinklé*, *Philadelphia, Feb. 11, 1847.*

CULTURE OF GRAPES AT THE SOUTH.—I have made some progress in the successful cultivation of the Grape, that may not be uninteresting to your readers, and give my mode and the results in as few words as possible. That every one may draw his own conclusion, I state all the facts first, and afterwards my success.

When I purchased the place upon which I reside, while walking in the garden, my attention was directed to a few grape-vines, (of the varieties *Isabella*, *Bland's* and *Herbemont Madeira*) and was assured by the former proprietor that they had been of little use to him, invariably blasting before maturity. My first year's experiment did not give me a dozen bunches of matured grapes. The second, which was 1845, I used the pruning knife in January very freely, and took off closely *all the decayed bark*, and then gave the vines, (that is the old wood) a thick coating of *lime and sulphur*, made into a white-wash in the proportions of one pound of the former to half a pound of the latter. The result was far beyond my most sanguine expectations. Of the whole amount of grapes produced I took no account, except from three vines of the *Isabella*. From these three vines I furnished to a relative, giving a wedding entertainment, grapes in *profusion*, for one hundred and fifty persons. And so delicious were they in flavor, having remained on the vine till the first of October, that they were preferred to all the other delicacies of

the evening. They elicited the commendations of every one, and were pronounced by all the most superior fruit of the kind that had ever been seen here. The last year, 1846, I pursued the same plan, and though not with altogether the same success, owing to the immense quantity of rain that fell from the beginning of spring till late in the fall, yet with sufficient success to satisfy me that there is virtue in the application of which I have spoken. My grapes last year were far superior to those of my neighbors, who had not become converts to my mode of cultivation.

I am aware that in all experiments in horticulture, we should be cautious in arriving at conclusions before we are satisfied of the true causes; and hence I have been particular in giving all the facts connected with my success. Some may say that it was not the simple barking of the vines and the white-wash. Why then should I have succeeded the two years I used it?—for it was the same soil and the same vines, that before I and my predecessor had been unsuccessful in making produce any thing. I do not claim originality in the matter, being indebted to an article in *Hovey's Magazine of Horticulture* for the information that gave me such successful results. The soil in which my grape-vines grow, is a sandy one, made rich by stable manure, and an occasional dressing of wood ashes. They are trained upon trellises about seven or eight feet high, and are pruned in the summer also. I, however, doubt the benefit of summer pruning, especially to the vigor and health of the vine. Of this, however, I hope to make some further experiments, the result of which you shall have in due time. From the experiments made in this section with the different varieties of grape, I fear that we shall be compelled to relinquish the cultivation of the foreign varieties, as thus far they have by no means answered our expectations. Yours very respectfully, *P. Clayton*, *Athens, Feb. 2, 1847.*

P. S. I am using my exertions for the circulation of your *Horticulturist*, and hope to see it on the centre table of every lover of flowers and fruits. Our community is becoming more and more enamoured with the beauties of the garden, and though we are on the outskirts of a people that for many years have thought of no other flower but a cotton bloom, and considered all attention paid to the cultivation of fruits as time unemployed, we can boast in some few of our gardens of fine collections. We already have upwards of one hundred varieties of the pear, and trust that in a few years we shall be the Boston of the South in the successful cultivation of that delicious fruit.

THE LOCUST.—*Mr. Editor:* Having been myself uncertain about the varieties of trees to which the name "Locust" has been applied, and finding many persons with whom I have conversed, give very different opinions about them, I set myself about the investigation, being desirous of procuring stocks or seeds for planting about my farm. In the spring of 1844, I procured seeds from Mr. Thorburn, in New York, and having prepared them by pouring boiling water over them and letting

them stand until they swelled and burst (as directed by the late Dr. Bard, of N. Y.) I planted them in the middle of May in drills, and now have the satisfaction of seeing, in luxuriant growth around me, numbers of these beautiful trees of the size of from 10 to 15 feet in height, and having several times headed them down, they have become thick and bushy; these trees are the *Robinia pseud-acacia*, very fully described by Michaux in his *Sylva Americana*, which I now have before me. East of the Allegany mountains, he says, it begins to grow naturally in Pennsylvania, in lat. $40^{\circ}20'$, but west of these mountains it is found 2° or 3° further north, from the climate being milder; those trees which are found to the north of this latitude, and in the eastern states, are from planted stocks; and in the southern and middle states it is not often found within fifty miles of the Atlantic.

Its dimensions vary with the soil and climate. In Virginia and Kentucky it sometimes attains the size of 4 feet diameter, and 70 or 80 feet high; but this is twice the size it attains east of the mountains. The flowers, seed-vessels and graceful foliage, are too well known to need description here. On old trees the bark is thick and deeply furrowed, and the young tree is armed with formidable thorns which disappear as the tree grows older; the value of the wood is well known; its color varies with the climate and soil in which it grows, as also its durability. That wood is generally esteemed best whose heart is red, the next valuable is greenish yellow, and the least valuable is that with white heart, giving rise to the names of red, green or yellow and white locust; and in the west is a variety sometimes called *black locust*. The locust, after the third year of its growth, begins to convert its sap into perfect wood, which is not done by the oak, chestnut, beech and elm, till after the tenth or fifteenth year; this, with its great durability and rapidity of growth, renders it most valuable for plantation.

In cultivating them, locusts when young, should be kept up straight and trimmed up to a proper height; and when they branch out, the ends should be topped off to thicken the heads.

Michaux mentions also the *Robinia pseud-acacia spectabilis*, which in its early age is entirely destitute of thorns; its leaves are larger and growth more rapid than the above; its seeds however produce plants with thorns.

A variety is also described called *Robinia viscosa*, a rose flowering locust; this however, does not exist naturally north of lat. 35° ; its ordinary stature does not exceed 40 feet, with a diameter of 10 or 12 inches; its wood is of a greenish color, and except in size it resembles the common species. This variety will support the winters of New-York and Pennsylvania.

These appear to be the only varieties of *Robinia*; the first described, being that which is common and which is found in Dutchess county, N. Y., rather widely spread.

In the neighborhood of Philadelphia, the term Locust is applied to a number of trees that certainly differ greatly from each other, viz. We have the *Robinia pseud-acacia*, which is commonly known

as the Locust; we have also what is called the sweet or honey Locust, *Gleditschia triacanthos*; it is found with us, perhaps a transplanted tree, for Michaux says it is peculiar to the country west of the Allegany mountains and to the Cumberland valley. In Illinois it is sometimes called *Fevier*. West of the mountains, Michaux says it attains a very ample size, having measured trees there which were 3 or 4 feet in diameter, and with an undivided trunk for 40 feet; its bark detaches itself in plates 3 or four inches wide, and 2 or 3 inches thick; the trunk is twisted and occasionally with clefts; the branches are covered with thorns several inches long, woody, and of a reddish color; armed at some distance from the base with smaller secondary thorns; the leaves are not more than half the size of the common locust; the flowers small and not very conspicuous; the seed pods are much larger than the other, being about 12 inches long, and $1\frac{1}{2}$ wide, and contain seeds brown in color of the size of a small flat kidney bean, about half an inch long and surrounded with a pulpy substance, which when ripe, is brown and very sweet; (hence the name.) The wood resembles the locust, but is more porous, and though hard when seasoned, yet is not very valuable.

There is also a tree or bush called Locust, which is seen in hedges, of the height of about 20 feet; the leaves of which resemble that last described, but the seed-vessels are not so large; the flowers are sweet smelling. Michaux says nothing about it; what is it? He describes the Water Locust, *Gleditschia monosperma*; this is a tree of southern climate, and is of not much use or beauty.

As the Locust is a tree of great value, and now much neglected, I have thought the attention of cultivators might be directed to it with advantage. If you have a place for the above in your journal, I will be pleased to see it in the next number. *A Subscriber. Tredyfffin, Chester Co., Pa., Jan. 4, 1847.*

CULTURE OF OXALIS BOWII.—*Oxalis Bowii*, by the following treatment, may be made a beautiful ornament in the flower-garden from the middle of August to November. In July, the beds that have been occupied with early annuals are well manured with leaf mould, or stable dung well decayed, mixing with it a little sand when the soil is stiff. The whole should then be thoroughly dug; after that the bulbs are planted ten inches apart every way, and three inches deep. They will shortly make their appearance above ground, and continue in bloom until the numerous flower stalks are cut down with the frost. They should then be taken up and planted in boxes, or flower pots, and placed in a pit or green-house to ripen the bulbs. When he later are ripened, they are placed in situations out of the reach of frost, and kept dry until the season of planting.

I find there is nothing better than clinkers for draining flower-pots. Most roots delight to run among them, particularly the roots of vines in pots. Yours truly, *Richard Parnell. Hamstead, L. I., Feb. 4.*

CLIMBING ROSES.—My hobby is Climbing Roses, and I should be glad to know what there is in the

world half as handsome as a rich luxuriant rose vine, clambering all over a neat country house, and fringed with clusters of blossoms, "too numerous to mention." I should be glad to show you a specimen of the *Boursalt elegans* that I have coaxed into a sort of giant here. My neighbor B. loves roses, and thinks he grows roses; but he is nothing to me. I was up sixteen feet before he was as high as your head. But he goes for *Ayrshires*, while I stick to *Boursalts*, and every fifth or sixth winter, you know, gives the *Ayrshires* a nip, while the *Boursalts* are as hardy as oaks. Pray what is your favorite climbing rose? Your obedient servant, J. H. B. Philadelphia, Feb. 10, 1847.

ANSWER.—The *Globe Ayrshire*, called *Rosa ruga* by some. The enthusiastic way in which our correspondent identifies himself with his "climbing roses," reminds us strongly of one of HOOD's most amusing characters. Mrs. Gardiner, a widow, whose only idea was her garden, and who sadly puzzled some of her acquaintances by the figurative style in which she continually talked about her hobby. Hood, looking over into her garden, compliments her on her fine carnations; on which the following conversation ensues:

'Yes, I've a stronger blow than any one in the place, and as to sweetness, nobody can come nigh me. Would you like to walk in, sir, and smell me?'

'Accepting the polite invitation, I stepped in through the little wicket, and in another moment was rapturously sniffing at her stocks, and the flower with the sanguinary name. From the walls I turned off to a rose-bush, remarking that there was a very fine show of buds.'

'Yes, but I want sun to make me bust. You should have seen me last June, sir, when I was in my full bloom. None of your wishy-washy pale sorts—(this was a fling at the white roses at the next door)—none of your Provincials, or pale pinks. There's no maiden blushes about me. I'm the regular old red cabbage!'

And she was right; for after all, that hearty, glowing, fragrant rose is the best of the species; the queen of flowers, with a ruddy *embonpoint*, reminding one of the goddesses of Rubens.

'And there's my American creeper. Miss SHARP pretends to creep, but Lor bless ye! afore she ever gets up to her first-floor window, I shall be running all over the roof of the willa. You see I'm over the portico already.'

While this conversation was going on, a deaf bachelor-neighbor, who has a garden of his own, passes by; but 'Mrs. GARDINER' hails him in a loud voice, and addresses him in her customary style.

'Well, and how are you, Mr. Burrel, after them east winds?'

'Very bad, very bad indeed,' replied Mr. Burrel, thinking only of his rheumatics.

'And so am I,' said Mrs. Gardiner, remembering nothing but her blight: 'I'm thinking of trying tobacco-water and a squirge.'

'Is that good for it?' asked Mr. B., with a tone of doubt and surprise.

'So they say: but you must mix it strong, and

squirt it as hard as ever you can over your affected parts.'

'What, my lower limbs?'

'Yes, and your upper ones too. Wherever you are maggotty.'

'Oh!' grunted the old gentleman; 'you mean vermin.'

'As for me,' bawled out Mrs. G., 'I'm swarming! And Miss Sharp is wus than I am.'

'The more's the pity,' said the old gentleman: 'we shall have no apples and pears.'

'No, not to signify. How's your peaches?'

'Why, they set kindly enough, Ma'am, but they all dropped off in the last frosty nights.'

'Ah, it ain't the frost,' roared Mrs. G., 'You have got down to the gravel—I know you have—you look so rusty and scrubby!'

'I wish you good morning, Ma'am,' said the little old bachelor, turning very red in the face, and making rather a precipitate retreat from the dwarf wall; as who wouldn't, thus attacked at once in his person and his peach-trees.

'To be sure, he was dreadful unproductive,' the widow said; 'but a good sort of body, and ten times pleasanter than her next-door neighbor at Number Ten, who would keep coming over her wall, till she cut off his pumpkin.'

'She now led me round the house to 'her back,' where she showed me her grass-plot, wishing she was greener, and asking if she ought not to have a roll. She next led me off to her vegetables, halting at last at her peas, some few rows of Blue Prussians, which she had probably obtained from Waterloo, they were so long in coming up.

'Backard, ain't I?'

'Yes, rather.'

'Wery; but Miss Sharp is backarder than me. She's hardly out of the ground yet; and please God, in another fortnight I shall want sticking.'

'There was something so irresistibly comic in the last equivocal, that I was forced to slur over a laugh as a sneeze, and then continued to ask her if she had no assistance in her labors.'

'What, a gardener? Never! I did once have a daily jobber, and he jobbed away all my dahlias. I declare I could have cried! But's very hard to think you're a valuable bulb, and when summer comes, you're nothing but stick and a label.'

'Very provoking, indeed!'

'Talk of transplanting; they do nothing else but transplant you from one house to another, till you don't know where you are. There was I, thinking I was safe and sound in my own bed, and all the while I was in Mr. Jones's. It is scandalous!'

PARLOR PLANTS IN WINTER.—There are so few who care enough for flowers to trouble themselves with them during the winter, that it seems almost unkind to criticise the imperfections of those who do. But it is very plain that, for the most part, skill and knowledge do not keep pace with good taste. Not to point out defects to those who are anxious to improve, would be the real unkindness. There are two objects for which plants are kept over.

Plants are housed for the sake of their verdure

and bloom during the winter; or, simply to protect them from the frosts. Our first criticism is, that these two separate objects are, to a great extent, improperly united. Tables and window-stands are crowded with plants which ought to be in the cellar or in a pit. Plants which have bloomed through the summer will *rest* during the winter. To remove them from the heat and dust of the parlor—to place them in a dry, light, warm cellar, will certainly conduce to their entire rest, and the parlor will lose no grace by the removal of ragged stems, falling leaves, and flowerless branches. When a large quantity of plants are to be protected, and cellar room is wanting, a pit may be prepared with little expense. Dig a place eight or ten feet square, in a dry exposure. The depth may be from five to six feet. Let the surface of this chamber be curbed about with a plank frame, the top of which should slope to the south at an inclination of about three inches to the foot. This may be covered with plank except in the middle where two sash may be placed. The outside of the plank may be banked up with earth, and if light brush or haulm be placed upon the top, in severe weather, it will be all the better. The inside may be provided with shelves on every side for the pots, and thus hundreds of plants may be effectually protected. During severe freezing weather the sash should be covered with mats, old carpet, straw or any thing of the kind; and in *very* cold weather this should not be removed during the day time: for if the plants have been touched with frost the admission of light will destroy or maim them, whereas, if kept in darkness, they will suffer little or no injury. Several families may unite in the expense of forming a cold-pit and thus fill it with plants at a small expense and very little inconvenience to each. *Very little* if any water should be given to plants thus at rest.

Even where plants are wanted to bloom in the parlor late in the winter, it is often better to let them spend the fore part of the winter in the cellar or pit.

Our second criticism respects the *character* of winter collections.

The most noticeable error is the strange crowd of plants often huddled together as if the excellence of a collection consisted in the number of things brought together. Everything that the florist sees in other collections has been procured as if it would be an unpardonable negligence not to have what others have. Hence we sometimes see scores of plants, very different in their habits, requiring widely different conditions of growth, reduced to one regimen, viz: a place near the window, so much water a day, and one turning round. This summary procedure, of course, soon results in a vegetable Falstaff's regiment—some plants being long, sprawling, gangling, some dormant and dumpy; some shedding their leaves and going to rest with unripe wood, some mildewed, a few faintly struggling to show here and there a bewildered blossom. In such a collection the eye is pained by the entire want of sympathy arising from jumbling together the most dissimilar kinds; from the want of robust health, and from the en-

tire disappearance of that vivid freshness and sprightliness of growth, compact while it is rapid, which gives a charm to well-managed plants.

All plants which are not growing, or for whose growth your parlors are not suitable, should be put into the cellar, and should there be allowed to stand over in a state of rest. According to your accommodations, select a *few* vigorous, symmetrical, hearty, healthy plants for the window. *One* plant well tended, will afford you more pleasure than twenty, half nurtured.

In our dwellings, one has to make his way between two extremes in the best manner that he can. Without a stove our thin walled houses are cold as an ice-house, and a frosty night sends sad dismay among our favorites. Then, on the other hand, if we have a stove, the air is apt to be parched and unwholesome, fit for salamanders, fat and torpid cats and dozing grandmothers. There is not much choice between an ice-house and an oven. *There can be no such thing as floral health without fresh air and enough of it.* This must be procured by frequent ventilation.—*est. Farm. and Gard.*

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TREATMENT OF CARNATIONS.—In your second number of the Horticulturist, a correspondent has given directions for raising carnations in pots. In England this plan is undoubtedly the best; but in our hot and dry summers, unless great care is bestowed in shading the pots by surrounding their sides with moss, and watering them most assiduously, the hopes of the amateur will be generally defeated; and even with all the care that can be bestowed, the plants will often wither and die, without any apparent cause. Will you permit me to give you the results of my small experience. In laying the carnation, I prefer cutting off a part of the heel just below a joint. From this square cut, I have found larger roots produced, than from the slanting heel represented in the cut. Instead of potting the layers for winter, I fill in the framework about six inches of rather sandy loam, and taking up each layer with a small ball and planting them in the frame in rows. When I have kept them in pots, I have generally found the pots burst by the frost before spring—and frequently fallen all to pieces, leaving the roots of the plants exposed. If set in the frame by the first of October, they will get firm hold of the ground before winter, and keep admirably, and give very strong plants for spring use.

About the 20th of April, if the ground is dry and the season well advanced, I make my bed by digging in deeply a large quantity of partly rotted dung from the hog pen—the ground is then raked and laid out in double rows, two feet apart, and four feet between the rows; holes are then made with a scoop-trowel two feet apart from centre to centre in the rows. The holes to be nine inches deep and nine inches across at the top; these holes I fill with the following compost: three parts good strong garden loam, three parts hot-bed manure two years old, three parts coarse river sand, two parts dry manure from the hen-house sifted, and two parts soot from a wood fire; with this compost when carefully incorporated I fill the hole to about

an inch above the surrounding soil, and in the centre of each hole I place a carnation plant, putting down the stick to tie it to at the same time, that I may not disturb the roots in future. As the flower stalk advances, it is tied to the stick, and all side branches and buds, except one at the top, cut off. The rows may be shaded, when in flower, with 30 inch cotton cloth supported by stakes at the sides of the rows, with a copper wire carried along them near the top. In this way I have had flowers measuring three and a half inches in diameter on strong stalks forty-five inches high. If the season is very dry, water between the rows, but not close to the roots.

Your correspondent in No. 2, is very right in his warning against mice, as I lost in one winter 400 fine plants by them. I am convinced if he will try my method of culture he will be better satisfied with it than his own—as it affords equally fine flowers, makes better layers, and is much less trouble. *Hartford, Conn., Jan. 20, 1847.*

[Excellent practical hints.—Ed.]

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RETROSPECTIVE CRITICISM.—The January No. has interested me so much, that I venture to send you a few remarks upon the articles contained in it:

Your correspondent, Mr. EATON, in his excellent article on transplanting orchards, recommends deep ploughing for trees, and afterwards that the holes be dug deep, and filled with fine manure, muck, etc. My practice would not be much unlike his. I should prepare my land thus: first plough and sub-soil plough to the depth of 18 or 20 inches, and cultivate and manure highly the first year. The second year plough crossways of the sub-soil furrows, and bring up two or three inches of the sub-soil; harrow, roll, horse plough, and work the whole till the soil is quite fine. Now set the trees on the soil and cover the roots carefully with not over two inches of firm loam. The tree should be previously prepared by pruning the roots, and in planting, the roots should be extended as horizontally as possible, diverging in equal distances. I should give no water, and place no manure in contact with the roots the first year. Mr. EATON's suggestions are, upon the whole, sound ones.

Mr. PERKINS' method of removing trees is admirable, and his remarks on watering the branches will be the means of saving many valuable trees. There are few persons more profound in such matters.

The account of the *Onondaga* and *Oswego Buerré* Pears, strengthens my belief that we have, or will soon have, more valuable native pears in the United States—sorts suited to our climate and soil—than we have or may hereafter obtain from Europe. I am confident that this is the case with regard to the apple.

For "sliding banks" let me add to your recommendation, when the soil is loose and rich, that of sowing *Lucerne* seed. The roots of this strong clover I have known to grow three feet in a season, and to form a very strong mat of fibres. It will continue in a kind and warm soil about fifteen years. *Norfolk. Massachusetts, Jan., 1847.*

THE ARBOR VITÆ.—Since the publication of our "chapter on hedges," we have had numerous letters inquiring about the *Arbor Vitæ* as a hedge plant, and expressing some surprise that we omitted it in our article.

To this we answer that our remarks were intended to apply to hedges chiefly, in a *useful* point of view—as a live fence and a general barrier against animals of all kinds. The *Arbor Vitæ* does not come properly under this head, since, as it has no thorns, it will not make a hedge fit for an outside barrier against cattle.

As an ornamental evergreen hedge, or as a plant for close screens, the *Arbor Vitæ* is perhaps unsurpassed by any other in this climate. It is perfectly hardy in all situations, is never attacked by insects, and for aught we know to the contrary will live for ever, under favorable circumstances—in other words it is one of the longest lived of hedge plants, and is scarcely subject to the usual diseases of trees.

A single row, the plants placed at one foot apart, is the better way of setting an *Arbor Vitæ* hedge. The best time is in the spring as soon as the buds begin to swell. Plants in the nurseries are worth from \$8 to 30 per 100, from one to four feet high. The seed is ripe in October, and should be sown in the autumn in deep and well pulverized soil, covered about half an inch deep.

The *Arbor Vitæ* of this part of the Hudson forms, naturally, so dense a conical hedge that scarcely any trimming is required. But no plant bears the shears better than this, and it may be made to take any form that the cultivator desires.

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GRAPES IN VINERIES.—Your No. 6 gives a description of a cheap structure for growing foreign grapes, which I doubt not is valuable, and will be adopted by many—but why is it, that the vines are recommended to be planted on the outside, and admitted in the usual way through the wall? Is this not rather usage than good philosophy? The roots by these means are thus placed in one medium, while the branches are in another and consequently a much higher temperature. It is a well-known fact that buds will burst, and shoots of considerable length will be made from exciting the insipid sap of the branches, while the roots themselves, from the coldness of the soil they are in, have not yet started into growth. May we not attribute to this cause the non-setting of the fruit, which frequently happens in a cold backward spring? Is it not essential that the soil in which a plant is grown should be at least equal, if not a higher temperature, than the surrounding atmosphere? A case in point I will mention. I had (to try an experiment on the difference of quality of the fruit of the same vine, whether grown in open air, or under glass) taken a rod of an *Isabella* vine into my green house. On the 26th of April it was in fine growth, with shoots of eighteen inches long, and setting fruit, while the rods upon the outside had not yet burst a bud. At this critical juncture my man unwittingly took away the litter which had been heaped about the stem and roots as a winter protection, and, on going into the green house the next morning after a slight frost, I found

to my chagrin, my flourishing shoots as drooping and flaccid as wet strings. I immediately sought out the cause and as quickly applied a remedy, viz: Three or four pails full of warm soap suds, poured over the stem and roots, and well covered again with warm dung. At noon I visited my patient, and found it not only convalescent, but as erect and vigorous as though nothing had happened—but alas! the fruit did not set. I lost the entire crop in the house, but on the outside, I was inclined to think, I had an additional quantity.

I will also add the result of this experiment for the last year—which was, that one bunch of the Isabella, grown only a few feet removed, but under glass, was, for quality of flavor, size, &c., worth three bunches of the outside ones. I have this fall trenched and prepared a border 40 feet long by 9 wide for some new vines, and feel anxious that this point of outside *versus* inside planting should be settled upon just principles. *Very truly yours, W. R. Coppock. Buffalo, Jan. 5, 1847.*

P. S.—Will not the accomplished President of the Mass. Hort. Society favor your readers with an article on his peculiar treatment of the *Camellia*, for which he is celebrated? *W. C. R.*

[The cheap vinery in our No. 6, alluded to by our correspondent, is what is technically called a cold vinery, in which the vines are not to be forced into an earlier growth by fire heat. In such circumstances it is usually considered preferable to have the border for the roots *outside* of the house, because it saves a great deal of the trouble involved by the necessity of constantly watering a border inside. Besides in this case an outside border is quite sufficiently warmed by the sun at the late season in spring at which the vine, not forced, begins to grow.—ED.]

THE AMERICAN HOLLY.—Will you inform me through the columns of your valuable Journal, of the proper season for transplanting the American Holly (*Ilex opaca*) from the woods. I have been very unsuccessful with them. Also, in what manner the seed should be treated to insure their growth.

Many of our apple growers complain of their apples not keeping, and attribute it to the drouth we had in the early part of autumn. Can that be the cause? and if so, could it not be prevented by putting a large portion of well rotted Tan about each tree. Yours, truly, *A Subscriber. New Jersey, Dec. 28, 1846.*

ANSWER.—The best time to transplant the American Holly is in *spring*, just as the buds are slightly swollen. The roots must not be suffered to

become dry in the least during or before transplanting.

The seeds of the Holly will not vegetate till the second year. They should be gathered when they are ripe, and buried (partially mixed with earth) in a heap or square bottomless box, in any spare corner of the garden. Here they will remain till the next spring, the earth where they lie being turned once or twice to facilitate the decay of the berry. Early in the spring, take up the seeds, and plant them half an inch deep, in a bed of good soil, in a situation rather shaded and not too dry. They will vegetate freely in May.

We do not think the drouth has to do with the rapid decay of apples this season, because the former was local, and the latter we understand is very general.—ED.

ROOT-GRAFTING.—Mr. PHENIX has given (p. 280) an admirable article on this subject,—really one of the most plain and practical articles that I have ever read. Why not work the apricot, and the peach, on roots, as he does the apple? I have seen peaches that were *root-grafted* this year; they are now 7 feet high! Yours with esteem, *M. W. Philips. Log Hall, Edwards, Miss., Dec. 27, 1846.*

GROSEILLE CERISE, OR CHERRY CURRANT.—This very handsome fruit has not, I think, been introduced to American gardens, nor is it to be found in any of the nursery men's catalogues. The honor of introducing so remarkable and beautiful a shrub to the gardens of France, belongs to MONS. ADRIEN SENECLAUZE, a distinguished horticulturist of Bourgargental, (Loire.) He received it from Italy, among a lot of other currants, known there by the common name of *Ribes acerifolium*. The above appellation was given by MONS. S., in consequence of the extraordinary size of the fruit. It first fruited in 1843, in the nursery of the Museum of Natural History, and from the plants there grown, a figure was given in the *Annales de Flore et de Pomone*, for February, 1844.

It is a vigorous growing bush, with handsome foliage, of bright green on the upper side of the leaf, and pale beneath. The fruit is very large, spherical and of a fine crimson color, more or less deep, according to maturity. Upon the dessert table it makes a fine appearance, and the flavor is very agreeable.

Genuine plants may be had of Messieurs JACQUIN, FRERES, nursery men, near Paris, and several others. I have a few plants, but they have not yet borne fruit. *Wm. W. Valk, M. D. Flushing, L. I., Dec. 5, 1846.*

MASSACHUSETTS HORTICULTURAL SOCIETY.

We have been furnished with the Schedule of Premiums offered for the Massachusetts Hort. Society, for 1847. The total amount of Premiums offered, is \$2000, as follows:

Premiums for Seedling Fruits and Plants.....	\$650
Special Prize List for Fruits.....	100
For Fruits, at the Annual Exhibition, in September.....	450
For Plants, Flowers, and Designs.....	650
For Vegetables.....	150

\$2000

We give this month, the Premiums on Fruit, and in our next number shall publish the list of prizes on Flowers and Vegetables.

PROSPECTIVE PREMIUMS.

For objects to be originated subsequent to A. D. 1846, and which, after a trial of five years, shall be deemed equal, or superior, in quality and other characteristics, to any now extant.

For the best Seedling Pear, the Society's large Gold

	Medal, valued at	\$20 00
" " " Apple, " "	" "	60 00
" " " Hardy Grape, " "	" "	60 00
" " " Plum, the Appleton Gold Medal, " "	" "	40 00
" " " Cherry, the Lowell Gold Medal, " "	" "	40 00
" " " Strawberry, the Lyman Plate, " "	" "	50 00
" " " Raspberry, " "	" "	40 00
" " " Hardy Rose, the Society's large-		
	Gold Medal, " "	60 00
" " " Camelia Japonica, " "	" "	60 00
" " " Azalea Indica, the Lowell " "	" "	40 00
" " " Tree Paeonia, the Appleton " "	" "	40 00
" " " Herbaceous Paeonia, Lowell " "	" "	40 00
" " " Potato, the Society's " "	" "	60 00

SPECIAL PRIZE LIST OF FRUITS.

2 prizes, two best varieties and specimens of Summer Apples.	
2 " " " " Autumn " "	
2 " " " " Winter " "	
2 " " " " Summer Pears	
2 " " " " Autumn " "	
2 " " " " Winter " "	
2 " " best varieties of Cherries.	
2 " " " " Plums.	
4 " " " " Peaches.	

The specimens presented for the above prizes, shall consist of not less than three specimens of each variety of Apples, Pears and Peaches; not less than one dozen Plums, and two dozen Cherries; all of which shall be at the disposal of the Committee on Fruits.

PREMIUMS FOR FRUITS.

For the best and most interesting exhibition of Fruits, during the season, the Lowell Gold Medal, valued at \$40 00. To be awarded at the Annual Exhibition in September.

APPLES.—For the best exhibition, a premium of the Society's plate, valued at.....	\$25 00
For the 2d best do., a premium of the Appleton Silver Gilt Medal.....	10 00
For the 3d best do., a premium of.....	5 00
PEARS.—For the best exhibition, a premium of the Lyman Plate, valued at.....	25 00
For the 2d best do., a premium of the Lowell Silver Gilt Medal.....	10 00
For the 3d best do., a premium of.....	5 00
GRAPES.—For the best exhibited, three varieties, two bunches each, the Lyman Plate, valued at.....	25 00
For the next best exhibited, 2d premium.....	10 00
For the next best exhibited, 3d premium.....	5 00
ASSORTED FRUIT.—For the best basket of Fruit, of various kinds, a premium of.....	10 00
For the next best do., 2d premium of.....	7 00
For the next best do., 3d premium of.....	5 00
For the best dish of Apples, not less than 12 specimens of one variety, a premium of.....	5 00
For the 2d best do., a premium of.....	3 00
For the best dish of Pears, not less than 12 specimens of one variety, a premium of.....	5 00
For the next best do., a premium of.....	3 00
Assorted fruits in baskets shall not be entitled to any other than the premium for such.	

The above premiums to be awarded on the first day of the Exhibition.

OFFERS DURING THE SEASON.

APPLES.—For the best summer Apples, on or before the 1st of September, a premium of.....	\$6 00
For the next best do., a premium of.....	4 00
For the best fall Apples, on or before the 1st Dec.,	6 00
For the next best do., a premium of.....	4 00
For the best winter Apples, on or before the 1st Dec., a premium of.....	6 00
For the next best do., a premium of.....	4 00
PEARS.—For the best collection of new Pears, not exhibited before this year, a premium of the Society's Silver Gilt Medal.....	15 00
For the next best.....	10 00
For the best summer Pears, on or before the first September, a premium of.....	6 00
For the next best do., a premium of.....	4 00
For the best fall Pears, on or before the 1st Dec.,	6 00
For the next best do., a premium of.....	4 00
For the best winter Pears, on or before the first March 1st, a premium of.....	10 00
For the next best do., a premium of.....	6 00
CHERRIES.—For the best specimen, not less than two quarts, a premium of.....	6 00
For the 2d best do., a premium of.....	4 00
PEACHES.—For the best specimens grown under glass, For the 2d best do., a premium of.....	4 00
For the best specimens grown in open culture, For the 2d best do., a premium of.....	4 00
APRICOTS.—For the best specimen of Apricots, a premium of.....	6 00
For the 2d best do., a premium of.....	3 00
NECTARINES.—For the best specimen of Nectarines, For the 2d best do., a premium of.....	4 00
QUINCES.—For the best specimens of the best kind of Quinces, a premium of.....	5 00
For the 2d best do., a premium of.....	3 00
PLUMS.—For the best Plums of the best flavor, not less than two quarts, a premium of.....	6 00
For the next best do., a premium of.....	3 00
GOOSEBERRIES.—For the best flavored and finest specimens, two boxes, a premium of.....	5 00
For the 2d best do., a premium of.....	3 00
CURRENTS.—For the best flavored and finest specimens, two boxes, a premium of.....	5 00
For the 2d best a premium of.....	3 00
RASPBERRIES.—For the best specimens of Raspberries, not less than two boxes, a premium of.....	5 00
For the 2d best do., a premium of.....	3 00
STRAWBERRIES.—For the best specimens of Strawberries, not less than two boxes, a premium of.....	6 00
For the 2d best do., a premium of.....	4 00
For the 3d best do., a premium of.....	3 00
WATER MELON.—For the best specimen of Water Melon, a premium of.....	5 00
For the 2d best do., a premium of.....	3 00
MUSK MELON.—For the best Musk Melon, a premium of.....	5 00
For the 2d best do., a premium of.....	3 00
FIGS.—For the best specimen of Figs, a premium of.....	5 00
For the 2d best do., a premium of.....	3 00
GRAPES.—For the best specimens and the best varieties of Grapes, grown under glass previous to July 1st, a premium of.....	10 00
For the 2d best do., a premium of.....	7 00
For the best specimens and varieties of Grapes, grown under glass subsequently to July 1st, a premium of.....	10 00
For the 2d best do., a premium of.....	7 00
GRAPES, (Native).—For the best specimen and variety of Native Grapes, a premium of.....	5 00
For the 2d best do., a premium of.....	3 00
The Committee on Fruit will hold a session to award premiums on Summer Apples and Pears, on the first Saturday in September.	
On Fall Apples and Pears, on the first Saturday in Dec.	
On Winter Apples and Pears, on the 1st Saturday in March.	
All gratuities for seedling will be equal to the highest prize awarded to that variety of fruit.	

THE

Horticulturist,

AND

JOURNAL OF RURAL ART AND RURAL TASTE.

VOL. I.

APRIL, 1847.

No. 10.

WE ARE once more unlocked from the chilling embraces of the Ice-King! APRIL, full of soft airs, balm-dropping showers, and fitful gleams of sunshine, brings life and animation to the millions of embryo leaves and blossoms, that, quietly folded up in the bud, have slept the mesmeric sleep of a northern winter—APRIL, that first gives us, of the northern states, our proper spring flowers, which seem to succeed almost by magic to the barrenness of the month gone by. A few pale snowdrops, sun-bright crocuses, and timidly blushing mezeriums, have already gladdened us, like the few faint bars of golden and ruddy light that usher in the full radiance of sunrise; but APRIL scatters in her train as she goes out, the first richness and beauty that really belong to a temperate spring. Hyacinths, and daffodils, and violets, bespread her lap and fill the air with fragrance, and the husbandman beholds with joy his orchards gay with the thousand blossoms—beautiful harbingers of luscious and abundant crops.

All this resurrection of sweetness and beauty inspires us with a desire to look into the *Flower Garden*, and to say a few words about it, and the flowers themselves. We trust there are none of "our parish," who,

though they may not make flower gardens, can turn away with impatient or unsympathising hearts from flowers themselves. If there are such, we must, at the very threshold of the matter, borrow an homily for them from that pure and eloquent preacher, MARY HOWITT:—

"God might have made the earth bring forth
Enough for great and small,
The oak tree and the cedar tree,
Without a flower at all.

Our outward life requires them not—
Then wherefore had they birth?
To minister delight to man,
To beautify the earth.

To comfort man, to whisper hope
Whene'er his faith is dim;
For whoso careth for the flowers,
Will much more care for him!"

Now, there are many genuine lovers of flowers who have attempted to make flower-gardens—in the simplicity of their hearts believing it to be the easiest thing in the world to arrange so many beautiful annuals and perennials into "a living knot of wonders,"—who have quite failed in realizing all that they conceived of, and fairly expected, when they first set about it. It is easy enough to draw upon paper a pleasing plan

of a flower-garden, whether in the *geometric*, or the *natural*, or the "*gardenesque*" style, that shall satisfy the eye of the beholder. But it is far more difficult to plant and arrange a garden of this kind, in such a way as to afford a *constant succession* of beauty, both in blossom and leaf. Indeed, among the hundreds of avowed flower gardens, which we have seen in different parts of the country, public and private, we cannot name half a dozen which are in any considerable degree *satisfactory*.

The two leading faults in all our flower gardens, are, the *want* of *proper selection* in the plants themselves, and a *faulty arrangement*, by which as much surface of *bare soil* meets the eye as is clothed with verdure and blossoms.

Regarding the first effect, it seems to us that the entire beauty of a flower garden almost depends upon it. However elegant or striking may be the design of a garden, that design is made poor or valueless, when it is badly planted, so as to conceal its merits, or filled with a selection of unsuitable plants, which, from their coarse or ragged habit of growth, or their remaining in bloom but a short time, give the whole a confused and meagre effect. A flower garden, deserving the name, should, if possible, be as rich as a piece of embroidery, during the whole summer and autumn. In a botanical garden, or the collection of a curious amateur, one expects to see *variety of species*—plants of all known forms, at the expense of every thing else. But in a flower garden, properly so called, the whole object of which is to afford a continual display of beautiful colors and delicious odors, we conceive that every thing should be rejected, (or only most sparingly introduced,) which does not combine almost perpetual blooming, with neat and agreeable habit of growth.

The passion for novelty and variety among the lovers of flowers, is as great as in any other enthusiasts. But as some of the greatest of the old painters are said to owe the success of their masterpieces to the few colors they employed, so we are confident the most beautiful flower gardens are those where but few species are introduced, and those only such as possess the important qualities we have alluded to.

Thus among flowering shrubs, taking for illustration the tribe of *Roses*, we would reject, in our choice flower garden, nearly all the old class of roses which are in bloom for a few days and but once a year, and exhibit during the rest of the season, for the most part, meagre stems and dingy foliage. We would supply their place by Bourbons, Perpetuals, Bengals, etc., roses which offer an abundance of blossoms and fine fresh foliage during the whole growing season. Among *annuals*, we would reject every thing short lived, and introduce only those, like the *Portulaccas*, *Verbenas*, *Petunias*, *Mignonette*, *Phlox Drummondii*, and the like, which are always in bloom, and fresh and pretty in habit.*

After this, we would add to the effect of our selection of perpetual blooming plants, by abandoning altogether the old method of *intermingling* species and varieties of all colors and habits of growth, and substitute for it the opposite mode of *grouping* or *massing* colors and particular species of plants. Masses of crimson and white, of yellow and purple, and the other colors and shades, brought boldly into contrast, or disposed so as to form an agreeable harmony,

* Some of the most beautiful of the perpetual blooming plants for the flower garden, are the *Salvias*, *Bougardias*, *Scarlet Geraniums*, &c., properly green-house plants, and requiring protection in a pit or warm cellar in winter. "Bedded out" in May, they form rich flowing masses till the frosts of autumn.

will attract the eye, and make a much more forcible and delightful impression, than can ever be produced by a confused mixture of shades and colors, no where distinct enough to give any decided effect to the whole. The effect of thus collecting masses of colors in a flower garden in this way, is to give it what the painters call *breadth of effect*, which in the other mode is entirely frittered away and destroyed.

This arranging plants in patches or masses, each composed of the same species, also contributes to do away in a great degree with the second fault which we have alluded to as a grievous one in most of our flower gardens—that of the exhibition of bare surface of soil—parts of beds not covered by foliage and flowers.

In a hot climate, like that of our summers, nothing is more displeasing to the eyes or more destructive to that expression of softness, verdure, and gaiety, that should exist in the flower garden, than to behold the surface of the soil in any of the beds or parterres unclothed with plants. The dryness and parched appearance of such portions goes far to impair whatever air of freshness and beauty may be imparted by the flowers themselves. Now whenever beds are planted with a heterogeneous mixture of plants, tall and short, spreading and straggling, it is nearly impossible that considerable parts of the surface of the soil should not be visible. On the contrary, where species and varieties of plants, chosen for their excellent habits of growth and flowering, are planted in masses, almost every part of the surface of the beds may be hidden from the eye, which we consider almost a *sine qua non* in all good flower gardens.

Following out this principle—on the whole perhaps the most important in all flower gardens in this country—that there should, if

possible, be no bare surface soil visible, our own taste leads us to prefer the modern English style of laying out flower gardens upon a *ground work of grass* or turf, kept scrupulously short. Its advantage over a flower garden composed only of beds with a narrow edging and gravel walks, consists in the greater softness, freshness and verdure of the green turf, which serves as a *setting* to the flower beds, and heightens the brilliancy of the flowers themselves. Still, both these modes have their merits, and each is best adapted to certain situations, and harmonizes best with its appropriate scenery.

There are two other defects in many of our flower gardens, easily remedied, and about which we must say a word or two in passing.

One of these is the common practice, brought over here by gardeners from England, of forming raised *convex* beds for flowering plants. This is a very unmeaning and injurious practice in this country, as a moment's reference to the philosophy of the thing will convince any one. In a *damp* climate, like that of England, a bed with a high

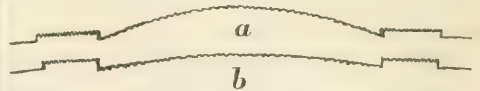


Fig. 103. Section showing the surface of the beds.

convex surface, (*a*, fig. 103) by throwing off the superfluous water, keeps the plants from suffering by excess of wet, and the form is an excellent one. In this country, where most frequently our flower gardens fail from drouth, what sound reason can be given for forming the beds with a raised and rounded surface of six inches in every three feet, so as to throw off four-fifths of every shower? The true mode, as a little reflection and experience will convince any one, is to form the surface of the bed nearly level, (*b*) so

that it may retain its due proportion of all the rains that fall.

Next to this is the defect of not keeping the walks in flower gardens *full* of gravel. In many instances that we could name, the level of the gravel in the walk is six inches below that of the adjoining bed or border of turf. 'This gives a harsh and ditch-like character to the walks, quite at variance with the smoothness and perfection of details which ought especially to characterize so elegant a portion of the grounds as this in question. "Keep the walks brim full of gravel," was one of the maxims most strongly insisted on by the late Mr. LOUDON, and one to which we fully subscribe.

Our engraver has executed, for our FORTISPIECE of this month, a copy of the plan of the celebrated flower garden of BARON VON HÜGEL, near Vienna. This gentleman is one of the most enthusiastic devotees to Horticulture in Germany. In the *Allgemeine Garten Zeitung*, a detailed account is given, by the Secretary of the Imperial Horticultural Society of Vienna, of the residence and grounds of the Baron, from which we gather that they are not surpassed in the richness and variety of their botanical treasures by any private collection on the Continent. "A forest of Camellias almost makes one believe that he is in Japan." Some of these are 22 feet high, and altogether the collection numbers 1000 varieties. The hot-house devoted to *orchids*, or air plants, contains 200 varieties, and the various green-houses include equally rich collections of the exotics of various climates. Regarding the Baron's flower garden itself, we quote the words of M. PEINTER :

"But still another most delightful scene is reserved, which is a mosaic picture of flowers, a so-called Rococo garden. We have to thank BARON VON HÜGEL for giving

the first example of a style, since pretty largely copied, both here and in the adjacent country. A garden, laid out in this manner, demands much cleverness and skill in the gardener, both in the choice and the arrangement of the flowers. He must also take care that, during the whole summer, there are no portions destitute of flowering plants. It is but justice to the Baron's head gardener, to affirm that he has completely accomplished this task, and has been entirely successful in carrying out the design or purpose of this garden. The connoisseur does not indeed see the usual collection of ornamental plants in this sea of flowers, but a great many varieties; and, in short, here, as every where else, the æsthetic taste of the Baron predominates. Beautiful is this garden within a garden, and hence it has become the model garden of Austria. Around it the most charming landscape opens to the view, gently swelling hills, interspersed with pretty villages, gardens and grounds."

In the plan of the garden, *a* and *b* are masses of shrubs; *c*, circular beds, separated by a border or belt of turf, *e*, from the serpentine bed, *d*. The whole of this running pattern is surrounded by a border of turf, *f*; *g* and *h* are gravel walks; *i*, beds, with pedestal and statue in the centre; *k*, small oval beds, separated from the bed, *l*, by a border of turf; *m*, *n*, *o*, *p*, irregular or arabesque beds, set in turf.

As a good deal of the interest of such a flower garden as this, depends on the plan itself, it is evident that the beds should be filled with groups or masses, composed mostly of *low growing* flowers, as tall ones would interfere with, or break up its effect as a whole. Mr. LOUDON, in some criticisms on this garden, in the *Gardener's Magazine*, says, that the running chain

pattern of beds, which forms the outer border to the design, was originated in England, by the Duchess of Bedford, about the year 1800. "It is," he remarks, "capable of producing a very brilliant effect, by planting the circular beds, *c*, with bright colors, each alternating with white. For example, beginning at *c*, and proceeding to the right, we might have dark red, *white*, blue, *white*, yellow, *white*, scarlet, *white*, purple, *white*, and so on. The interlacing beds, *d*, might be planted on exactly the same principle, but omitting white. Proceeding to the right from the bed *d*, which may be yellow, the next may be crimson, the next purple, the next orange, and so on."

This plan is by no means faultless, yet as it is admirably planted with ever-blooming flowers, and kept in the highest order, it is said to attract universal admiration, and is worthy of the examination of our floral friends. We should imagine it much inferior, in design and general effect, to the very beautiful new flower garden at *Montgomery Place*, the seat of Mrs. EDWARD LIVINGSTON on the Hudson, which is about double its size, and is undoubtedly one of the most beautiful and most tastefully managed examples of a flower garden in America. Hereafter we may have the pleasure of laying the plan of it before our readers.

THE BELLE DE BRUXELLES AND PAQUENCY PEARS.

BY P. BARRY, ROCHESTER, N. Y.

[WE were much gratified while in the *Mount Hope Garden*, at Rochester, last summer, to find that MESSRS. ELLWANGER & BARRY had succeeded in introducing the true *Belle of Brussels* pear. We have been familiar with the appearance of this handsome fruit, from a fine colored plate in NOISETTE'S *Jardin Fruitier* for years, and have, like other collectors, endeavored to procure it from abroad without success—the *Belle et Bonne* and the *Angleterre*, two inferior fruits, always having been received under this name.

We saw by the first glance at the tree referred to in the following article, that the genuine sort was at last obtained. It is undoubtedly a scarce variety abroad. We observe by the *London Horticultural Society's Catalogue* that it has been lost from that collection. We think it likely to prove a very valuable addition to our early fruits.

Mr. BARRY'S description is the best we

have seen of this variety. That in the *Jardin Fruitier* is incomplete.* The colored figure in that work, however, shows a fine specimen, and we give an outline from it in the same figure with Mr. BARRY'S; *a* being the outline from the *Jardin Fruitier*; *b* the outline sent us from one of the specimens grown at Rochester. In the size of the latter, of course allowance must be made for the enormous crop borne by the tree, of which it was a part. This crop was not quite ripe when we saw the tree, but the specimens were very beautiful in form and color, and we hope the stock of this, the genuine *Belle of Brussels*, at the *Mount Hope Garden*, will soon find its way into general cultivation.—ED.]

* "Fruit gros, souvent très allongé, renflé à la base, jaune dans l'ombre, colore en rouge du côté du soleil lorsqu'il est bien exposé, autrement restant jaune partout: chair blanche, fondant, parfumée, très bonne; sa maturité a lieu vers le milieu d'Août."—p. 121.

THESE are two European pears that may very justly be placed on your list of *select kinds*.

They were procured in France in the spring of 1844, by my partner, Mr. ELL-

WANGER, among a large collection of Belgian and French varieties. They have borne for two years, and I think I may speak of them with some degree of confidence.

I. THE BELLE DE BRUXELLES.

Belle d'Août.

This I think unsurpassed, at least by any summer pear of native or foreign origin that I have yet seen. It combines in an eminent degree, the various qualities that are deemed indispensable in a good fruit. The tree is vigorous, its growth is compact and straight; it is prolific to a fault; indeed, we suffered our specimen tree to bear so many, the past season, that the size and quality of the fruit were considerably impaired. The fruit will require thinning, particularly when grown on the quince. Our tree, on the quince stock, is only between four and five feet high, moderately branched, and yet it bore and ripened *sixty specimens*; but they were inferior, generally, to the two dozen borne the pre-

vious year. By the way, I may remark that this matter of thinning is of great importance in growing fruits, and particularly pears. Many sorts are so prolific in habit as to bear double the number that the tree is able to mature perfectly, and if thinning is not attended to, the best varieties will sometimes prove insipid and worthless. I find this to be the case with *Capiaumont Cabbasse*, *Henry the 4th*, *Passe Colmar*, and many others.

The BELLE DE BRUXELLES may be described thus:

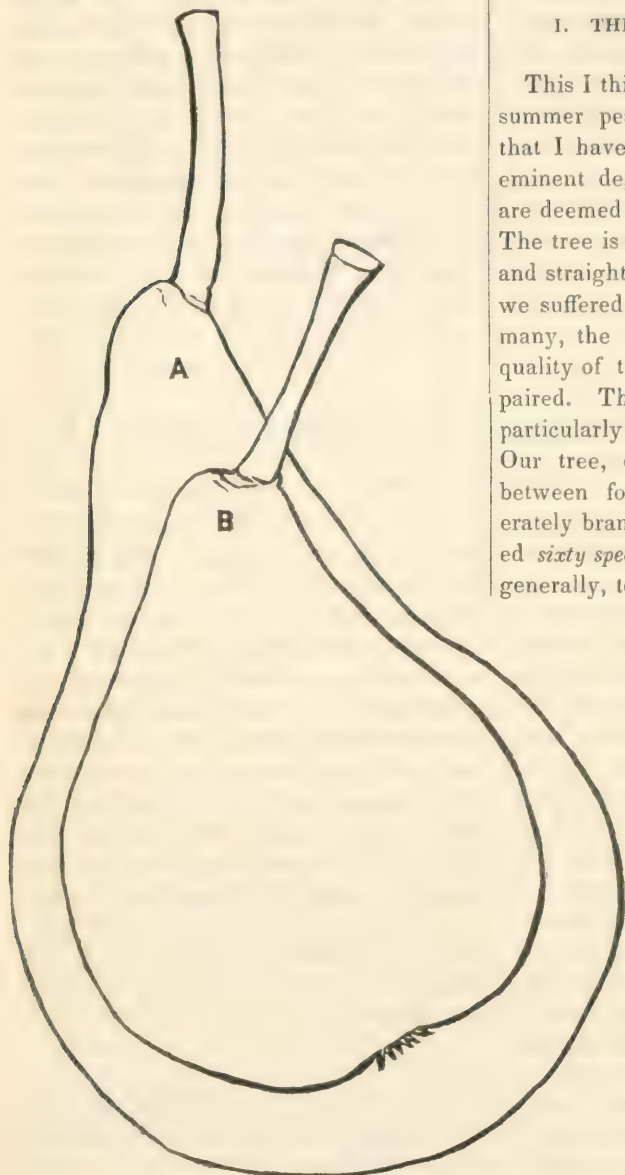


Fig. 104. Belle de Bruxelles Pear.

Fruit, large; (the figure is rather below the average; large specimens will measure nearly four inches long.) *Thape*, long pyriform, broadest a little above the eye, and tapering regularly to the stalk, where it has usually two or three little folds or fleshy rings, like the *St. Ghislain* and some others. *Stalk*, an inch and a half to two inches long, pretty stout, and curved, with usually a fleshy knob on the end attached to the tree. *Calyx*, large, open, even with surface. *Skin*, smooth, rich deep yellow at maturity, sprinkled all over with small greenish dots, with a delicate touch of red on the sunny side. *Flesh*, white, fine grained, melting, sweet and fine flavored. Ripe from the 10th to the last of August.*

II. THE PAQUENCY.

This is one of the most delicious autumn varieties. The tree is a rapid, vigorous grower, and extremely prolific. Like the *Belle de Bruxelles*, the fruit requires thinning. We had them in eating, the past autumn, at the same time with the *White Doyenne*, *Seckel*, *Ananas*, *Urbaniste*, *Onondaga*, *Stevens' Genesee*, and other first rate sorts, and on being tasted and compared with them by our neighboring *connoisseurs* in these matters, they were freely admitted into that class.

Fruit, medium size. *Shape*, regular pyriform, broadest one-third above the eye, tapering regularly to a point at the stalk.

* *Note*.—I have been informed that the *Belle de Bruxelles* of some of the Boston Gardens, has proved to be the *Belle et Bonne*, a round fruit, of great size, productiveness and beauty, but deficient in fine flavor. It does well with us, bears in great clusters, ripens from the middle to the last of September.

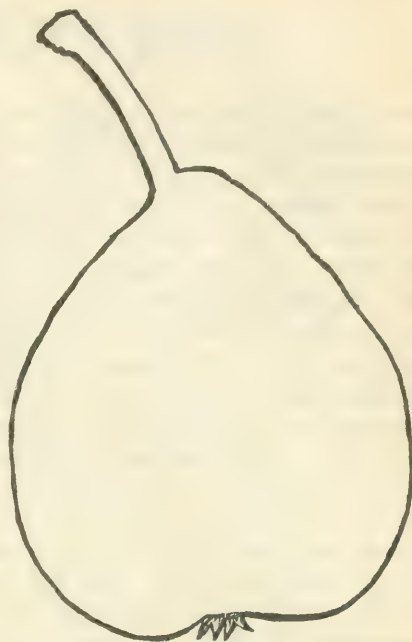


Fig. 105. *The Paquency Pear.*

Skin, smooth, dark yellow at maturity, with a tinge of dull red on the side fully exposed to the sun, sprinkled with dots and small patches of russet. *Stalk*, over an inch long, quite stout, of a dark brown color, and slightly curved. *Calyx*, open, segments stiff, basin shallow and marked with russet. *Flesh*, white, not very fine grained, but melting and abounding with a rich perfumed juice. *Core*, small. *Seeds*, perfect, dark brown. Ripens in October, and is in use till November.*

P. B.

Mount Hope Garden and Nurseries, Rochester, N. Y.

* We first tasted this pear three seasons since at the residence of Col. WILDER, near Boston, who we believe introduced it. Its flavor is excellent.—Ed.

HOW TO RAISE THE BEST GOOSEBERRIES.

BY A JERSEYMAN.

SIR—I hear almost every body complain of the difficulty of raising fine gooseberries. The bushes, to be sure, grow easily enough. It is not difficult to get from the nurseries the prime English sorts—sorts with large and high flavored fruit, really worth growing. But there seems to be something wrong in our warm and dry climate, that is utter ruin to the fruit. A sort of *scurf* or *mildew* settles on the berries as soon as they are about a quarter grown, and destroys the whole crop. Once attacked by this pest, the berries are past cure, and quite worthless.

Now I have been very lucky in my gooseberry growing, and it has struck me that a few words about my way of doing the thing might help some unfortunate being, fond of gooseberries, but who does not know how to raise them.

I plant my gooseberry trees in a long border on the north side of a paling fence. Before planting them, I trench the border two feet deep, as I know that the roots of the gooseberry love plenty of moisture all summer, which they can never get in the soil, unless it is made deeper than common, by trenching it well. For manure, I give it a heavy dressing of common stable manure, when the trenching is going forward.

I then put out my gooseberry plants early in the spring, or early in the fall, as may be most convenient to me. I have not found that the season makes much difference. I plant them about four feet apart every way, and always keep them trimmed to clean single stems like small trees.

There are hundreds of sorts of “prize gooseberries” raised in Lancashire, but they are

not all suited to this climate. I have tried a great many and have settled down upon *two*, which, taking all in all, I think not surpassed by any others for this climate. These are the *Crown Bob*, a grand old red gooseberry of excellent size, always bears good crops and possesses a high flavor; and the *White Smith*, quite as good among the whites, as *Crown Bob* is among the reds. There are no doubt many others, very good ones, in the catalogues, but there are none better, and as there is not much variety in gooseberry flavor, I am quite content with these two prime sorts, that will satisfy any body, however fastidious.

I prune my gooseberries among the very first bits of garden work done in the opening of spring. I usually cut out about one-third of the wood made the previous summer. As soon after that as the ground is in working order, I give the border where they grow the dressing for the season, after this fashion. I first provide myself with a couple of barrels of *soot*, as this is my favorite manure for this shrub. It is easily enough collected during the winter, with the help of a chimney-sweeper in my neighborhood, and I suppose every housekeeper might save enough for the gooseberries in his own garden, if he is not so large a gooseberry grower as myself, out of the sweepings of the chimneys and stove pipes about his own premises.

The gooseberry border is first nicely dug over. I then scatter a light dressing of the soot over the whole surface, and under the bushes, at the rate of a quart to each gooseberry bush. This gives them plenty of stimulus for the season's growth, for soot is a very



Fig. 106. a, *Mellings Crown Bob*. b, *Woodward's White Smith*.

powerful manure, and no plant likes richer soil than the gooseberry.

Next comes my remedy against the mildew. This is neither more nor less than *salt hay*, (i. e. hay from the salt marshes.)* As soon as I have made the top dressing of soot, I cover the whole surface of my gooseberry border with salt hay to the depth of three inches. This keeps the soil always moist and cool, not merely by covering the ground with the hay so that it shall not be made dry by the sun, but because the salt in the hay always attracts moisture from the air, and gives it out to the bushes. This pre-

vents the sudden changes from hot to dry, which always almost immediately cause mildew. I have tried it now six years and have never had a blighted berry from the first, though in the same soil, and with these very sorts, I had bother enough with this troublesome thing before.

My crops are regular and large. I send you a rough sketch (fig. 106) of about the usual size of my two favorite sorts, grown after my fashion. They may not equal the prize sorts of the Lancashire weavers, who put a saucer of water under their show berries to make great dropsical monsters of them, but I will answer for it, they are higher flavored. Yours with much respect,

A JERSEYMAN.

* [We suppose in districts of country where salt hay is not produced, a substitute might be found in any coarse common hay soaked in brine.—ED.]

The Cincinnati Strawberry Culture.

BY A. H. ERNST, CINCINNATI.

DEAR SIR—The questions of the character and habits of the Strawberry plant, and the principles on which they rest (now so satisfactorily settled in the minds of most of those who have paid attention to the subject,) has become, among *Horticulturists*, one of absorbing and deep interest. In the settlement of these principles, the advocates of old and vague notions have adhered to them with a tenacity and resolution that would be satisfied with nothing short of the most positive testimony. Had the explanations and developments of these principles been left to less antagonistical and persevering hands, they would still rest where KEENE, and others, faintly saw, and left them. A meed of praise is due to the indefatigable and persevering zeal of Mr. LONGWORTH, from the community, which would not be sufficiently expressed by a *medal of gold*. It is not, however, my design to take up your time, or that of your readers, in a eulogy; but to confine my remarks to the oft repeated inquiries, elicited by the statements of the extraordinary quantity of Strawberries raised in the vicinity, and sold in the Cincinnati market. "What are the sorts raised, and the method of their cultivation, with the extent of the ground occupied, and its yield?" These questions I shall endeavor to answer in their order, as collected by personal inquiries from the most prominent amateurs and cultivators, with some views and remarks on my own experience, premising with a remark or two on the adaptation of our *soil* and *climate* to the superior development of the *Strawberry*.

The soil in the region of Cincinnati, may

be said, in general terms, to consist of two kinds; *bottoms* and *upland*. The former is a rich sandy loam, more or less mixed with the washings of the vegetable mould from the uplands. The latter composes our hills, the tops and slopes of which are mostly covered with a dark rich vegetable mould, on a stiff limestone subsoil. This gives the cultivator an opportunity of adopting that soil most congenial to the productiveness of his plants. The composition of the top soil of the upland, on which the plants delight to luxuriate, with the tenacity of its subsoil to retain, and supply them with a greater uniformity of moisture, without a surfeit, renders the upland soil decidedly preferable. The blooming and fruiting season is mostly attended with exciting and stimulating showers of rain, with bright and invigorating sunshine intervening. Perhaps there are no temperate countries which exceed this in the luxuriance of its vegetation at this period. We have, then, all the natural elements most favorable to the fullest development and product of the Strawberry.

The sorts principally cultivated for the market, are,

1st. The *Early Scarlet*, the first and oldest sort introduced. Fruit of medium size, globular, bright scarlet, a good bearer, and a fine fruit, and desirable as an early variety.

2d. *Neck Pine*: Fruit large, conical, with a neck or shoulder, scarlet, early, a great bearer, and fine fruit.

3d. *Hudson*: Fruit large, shape conical, much inclined to flatten, dark red, flesh firm, acid, but fine flavored, without a neck, very hardy and a great and uniform bearer,

ripening some days after the *Early Scarlet* and the *Neck Pine*.

4th. *Hovey's Seedling* has produced very fine and large fruit, but does not yet appear much in our market. The expectations from it are very high, and extensive plantations have been and are being made. Should it, on an extensive scale, equal the expectations of cultivators, it will ere long become one of the principal sorts in the market.

Most of the foreign sorts, and those of our own country, of repute, are in the hands of amateurs and cultivators, on trial, but so far none have been found worthy to supplant those above named. Of these the *Hudson*, has, since its introduction among us, assumed and decidedly maintained the lead; it is, like the other three named, a pistilate plant, which will not fruit unless fertilized by the pollen of a staminate plant.

In the cultivation, there is nothing remarkably differing from well known practices, more than a due regard to the quantity of *staminate* plants permitted to grow with the *pistilates*. This is about one to every ten or fifteen. To guard against an undue proportion of staminates, and also to keep up a constant supply of young and vigorous bearing plants, new plantations are formed every third or fourth year, when the old plantations are turned under. This practice is applicable to cultivators on a small or moderate scale. The remaining part of the question will be fully and more satisfactorily answered by a few notes of my visit to, and a stroll over the *Strawberry fields of Kentucky*. These are situated on the west bank of Licking river, which empties its waters into the Ohio directly opposite to Cincinnati, thus affording them the best facilities to carry their fruit to market. My first call was about five miles up the

river. On inquiring for the proprietor, the good lady of the house informed me that he was not at home, but if I would "go to yon orchard," pointing to it, I should "find her *sister there pruning the trees*; she could give me all the information I desired." I soon found myself in the presence of the fair Horticulturist, *with her hatchet and saw in hand*. After making my bow, and receiving polite answers to my inquiries, from which I learned they were but new beginners, and had, in their first plantation, rested their hopes for future success on the *Hudson* and *Hovey's Seedling*, I passed on about two miles farther, to what may be called the "Culbertson settlement," consisting of *seven families*, all depending mainly on the culture of the Strawberry, to which, however, they have added the Raspberry and Apple, and some other fruits. I paid a visit to the oldest and largest cultivator, who kindly accompanied me over the fields, and from whom I obtained the following facts. The ground preferred is *new land, in its virgin state, immediately after the timber is cleared off*. This is, with the plough, formed into *lands* of four or five feet wide, and extending, in length, across the field. In the centre of these strips, or *lands*, a single row of plants is planted, two feet apart, all pistilate, except every fifth or sixth, which is a staminate. This planting is performed in the spring, and by fall there is a good supply of plants, which will yield a tolerable crop of fruit the next year. All the attention they receive afterwards, is running two or three furrows with the plough between the lands, in the fall or early in the spring, and at the same time, with a hoe, clearing off the weeds, grass, briars, &c. When, at last, these and the staminates become too numerous, the whole is turned under. The largest field I passed

over contained *thirty acres*, twenty-three of which are in a fruiting condition. This, as indeed are almost all, is located on the slope of a hill, having almost every aspect. The owner of this field, besides smaller ones, has a new field, of the last year's planting, of *twenty-three acres*, making *his entire Strawberry plantations fifty-five or sixty acres in extent*. From the best estimate I could obtain, there is not less than *one hundred acres in Strawberries* in this neighborhood. The owner of the thirty acre field, sent to market, from that and a seven acre lot adjoining it, *one hundred and twenty bushels per day*, for eight or nine days, during their prime, last summer. If we double this, which I am informed will be below the actual estimate, we have from this neighborhood a daily supply of *two hundred and forty bushels*.

There are, on both sides of the Ohio, many other quite extensive cultivators, for whom it will probably not be saying too much, that they add at least one hundred and fifty bushels per day to the supply. We have then an aggregate of *three hundred and ninety bushels*, as the *daily supply* of our market, for some eight or nine days of their prime, without saying one word of those raised in our private gardens, which is by no means a small quantity. This, multiplied by thirty-two, gives us *eleven thousand four hundred and eighty quarts per day*. These, at an average of six cents per quart, give us the daily sum of *six hundred eighty-eight dollars and eighty cents*, as a reward to the husbandman for this portion of his industry. The season continues eighteen or twenty days; of course half of this time the supply is not so great. The cultivation on this extensive scale is quite rude, compared with that on a more limited one, and the yield of course proportionally less. This is shown by the fact that the seven acre field

above alluded to, three years after its planting, when more attention could be bestowed on it, yielded a daily supply of *seventy-five bushels*! The land up the valley of Licking is among the best in this vicinity, and when Kentucky shall act wisely, and allow none but *freemen* to cultivate and tread her *soil*, this valley, owing to the character of its land, the various aspects afforded, and the easy communications with this rapidly growing *mart*, must become one *beautiful garden*, for miles up its banks, and land that can not be sold for over twenty-five to thirty dollars per acre, will then readily bring hundreds.

The sexual character of the Strawberry plant is so deeply interesting that I shall be pardoned for dwelling somewhat on that subject. The Strawberry plant, as now understood, may be divided into three distinct classes or divisions. First, those having both stamens and pistils so developed and perfect, that the one may fertilize the other, and are thus fruitful in themselves, or in other words, *perfect plants*. The second, are those having pistils or female organs fully developed, with generally the rudiments of the stamens, or male organ, but so defective as to be incapable of fertilizing the pistils; these are called pistilate, or female plants. The third, are those having the stamens perfectly developed, but mostly without the pistilate organs; these are called staminate, or male plants. Each of these divisions consists of innumerable varieties, of separate and distinct origin, varying more or less in the development of their sexual organs, so that it is not unusual to find a partial crop of fruit on some of the two last named divisions. These last two are, however, dependant on each other for a perfect and full fruiting. When the plants are properly proportioned, this is al-

ways more abundant than that of the first division. An important question has been raised, "how far is the character of the staminate impressed on the pistilate to affect the size and flavor of its fruit?" If we may be permitted to reason from well established analogies, it is certain that the seed does possess the properties of both parents to a greater or less degree. This would seem to justify the idea that the pulp also may, for that is as much the result of the union of the sexes as the seed, which it only envelops. [Our correspondent forgets that many male plants bear fine fruit, minus the seeds, without the aid of stamens—ED.] If it be true (as is believed by some) that the flavor of the cucumber is imparted to the melon, by the pollen of its bloom on the pistils of the other, there would seem to be good reason for directing attention to the subject, in the hope that it may induce those who have leisure, and feel an interest in the advancement of horticultural knowledge, to test the question by careful experiments.

The question of the *changeability* of the Strawberry plant, by your experiments on Hovey's Seedling, as detailed in the August No. of the "Horticulturist," is still left a debatable point. And unless you have some how been deceived, I do not see but that we are thrown back to where we started, and that with a degree of increased uncertainty that leaves the future prospects and hopes of the cultivator all a matter of chance, unless indeed your opinion shall prove true, that when the plant changes to pistilate or staminate, it is so permanently. Your view as to this point would seem to reconcile the difficulty under which Mr. Hovey has labored to discover the true character of his Seedling, which should, therefore, no longer be a subject of surprise.

My experience accords with that of our most eminent Horticulturists, who have devoted their attention to this subject, and whose opinions, so far as I can learn, are against the possibility of such change. Among them I will take the liberty to name Dr. W. SMITH. He informs me that he made a plantation of the Hudson, excluding all staminate plants, and remote from other plantations; the result was, his plants continued to bloom finely, from year to year, but without setting fruit; when satisfied, he introduced staminate plants, and the consequence was an abundant supply of fruit. Dr. SHALER informs me that some years since he procured, direct from Hovey, plants of his Seedling. These he increased by themselves; they bloomed finely, but set *no fruit*; at length he introduced into his plantation a single plant, in a pot, of the *Iowa* male Strawberry, when in bloom. Its ample supply of pollen was liberally strewed on the pistils of all the plants in its neighborhood, which resulted in the setting and maturing a good crop of fine fruit on all the plants within its reach, the others remaining unfruitful as before. R. BUCHANAN, Esq., late President of our Horticultural Society, informs me that he finds the same distinction to exist among the native or wild Strawberry plant, and on transplanting them to his grounds, has never discovered any change produced by cultivation on their sexual organs. This is also confirmed by N. LONGWORTH, Esq., GEO. GRAHAM, Esq., and Dr. MOSHER, who have all experimented considerably on the wild or native plant.

My own experience, corroborating these opinions and experiments, leads me to this point: that every variety of the Strawberry, from the original sorts, is the product or result of a *single plant*, from a *single seed*.

That I may be fully understood, permit me to illustrate. *Hovey's Seedling*, is the product of one single seedling plant, and not of two or more plants. This plant was either perfect in the structure of its male and female organs, or it was a pistillate or a staminate plant. What its character was at its first fruiting, it must still be, and will remain so, with its offspring. If it were otherwise, or there could be any uncertainty in this, where would be the security as to the continuance of this or any other variety? If one plant may change its character, all the rest may. Any plant, then, deviating from the original, I take to be spurious, however closely it may resemble it.

If you plant the seed of a Bellflower Apple, the probability is that the product of each seed will vary in its habits, growth, foliage, and fruit. So with each seed of a Strawberry. In the case of the Apple, you would expect no *radical* change in the offspring, whatever the mode adopted to increase or propagate it. This I think is precisely a parallel case, and if sound in one, must be in the other. It is true that bad, as well as good cultivation will affect the growth and fruit of either, but will not produce a radical change. That these views are in harmony with the laws that govern the continuation of races of plants and their varieties, I apprehend will not be controverted.

The idea, then, as suggested by Mr. LONDON, that "it is better to propagate only from hermaphrodite plants, for though some of the runners of these may prove sterile, yet the greater part will be prolific," is fallacious and untenable.

We must, then, look to some other source for the apparent or supposed change of the Strawberry plant. In this I apprehend we shall find no difficulty. Every cultivator

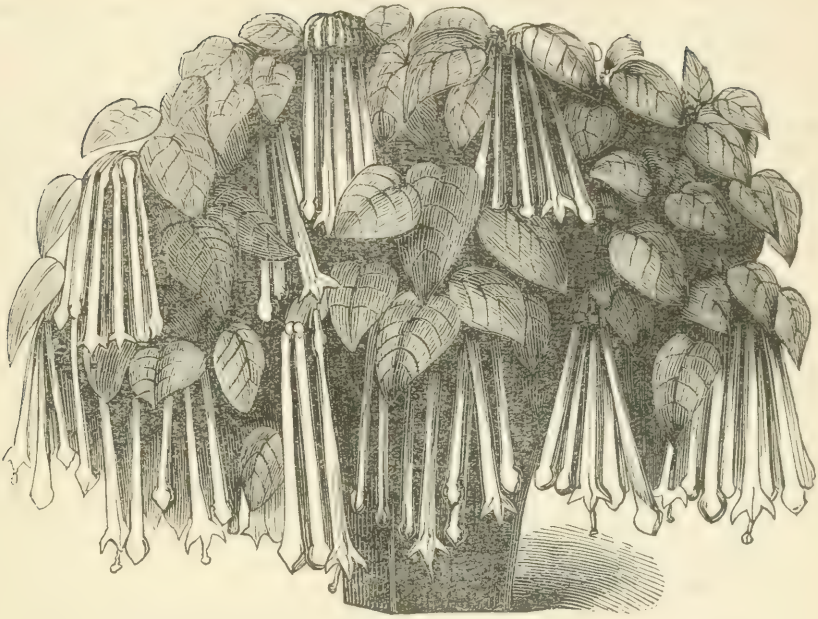
knows the rapidity with which runners are formed, and the extent to which they push, which is not unfrequently six to eight feet. This is more especially the case with the staminate plants, which are always (owing to their barrenness) the most vigorous and luxuriant. Their whole substance is spent in growth and multiplication. Although a distinct plant, its general resemblance to the pistillate plant when not in bloom, is such, in many cases, as to elude the most vigilant eye. It is not, therefore, safe to take it for granted, because we have carefully removed all blooming staminate plants that we are rid of them, but on the contrary, by the removal of the old staminates we afford greater facilities to the growth and development of such unblooming plants as have eluded our vigilance, and to our great surprise and disappointment we find our plantation full of them the next spring, when we are ready to conclude the plant is changeable. The safest practice is, if it is desired to exclude all staminate plants from the plantation,—when the plants are in fruit, carefully to take up all that are not well and fully set with perfect fruit, taking care at the same time that no other plantations are sufficiently near to admit interlopers, and that no accidental seedlings are permitted to spring up and to grow. If this is faithfully performed, I doubt not the experimenter will be a thorough convert to the doctrine that Strawberry plants are not changed from perfect to pistillate, or staminate, by good or bad cultivation.*

I hope, sir, that you will find sufficient *point* in the above remarks, to make an apology for the length of this article unnecessary.

A. H. ERNST.

Spring Garden, near Cincinnati, Jan. 30th, 1847.

* [This subject is now a matter of such nice observation, with so many of our cultivators, that we trust the coming season will decide it—Ed.]



THE LARGE FLOWERED FUCHSIA—FUCHSIA MACRANTHA.

FROM THE LONDON HORTICULTURAL MAGAZINE.

THE Fuchsia is a very popular family of plants, and though not a very extensive one, as compared with others we are acquainted with, yet it comprehends very considerable variety, both in the flowers, and in the habit of growth of the species which it contains. We are now looking at the genus, botanically—as a family group of distinct individual forms, called species. Florists have intermixed these species, until they have given rise to an almost endless number of varieties, some of which are indeed very distinct and very handsome, but the great majority are considered by many persons to be very inferior in beauty to the original kinds from which they were produced. The great and prevailing faults of these varieties are their sameness and tameness of coloring, and their coarseness of texture, which points—and they are blemishes—are much more observable in very many of the hybrids than in their parents.

The wild species are variously distribu-

ted, but with hardly an exception are found in the New World. Some of them are small spreading shrubs, with small flowers, of which class one now much neglected, called *microphylla*, is a floral gem. Others are of much larger size, with much larger flowers hanging on long stalks like “ear-drops,” from the base of every leaf, and furnishing the old-fashioned idea of a Fuchsia. Subsequently to the introduction of these, some kinds, with tube-shaped flowers several inches long, and hanging in dense bunches from the end of the branches, have made their appearance in our gardens; and others, again, have been imported, which, we are told by travellers, cling to the forest vegetation of South America, something in the way that the ivy embraces our native sylvan forms. Many species known to botanists, and which are regarded by them as the most remarkable native forms, remain to be introduced. Florists have attempted to bring the Fuchsia under

cognizance of their rigid rules, but with such a variety of original forms, it is no wonder that they have been less successful in moulding this flower to a "standard," than most others to which their attention has been directed.

Fuchsia macrantha, of which a representation accompanies this notice, is the most recent introduction, having been received from South America, by Messrs. Veitch and Son, of Exeter, from their collector, Mr. W. Lobb, and bloomed for the first time in this country during the spring of the present year, (1846.) We had an opportunity of witnessing blooming plants sent in April to the meeting of the Horticultural Society of London, and are therefore in a position to state, from personal inspection, that it is perfectly distinct from any of the kinds already in cultivation; we cannot indeed consider it to be the most beautiful of the kinds we are acquainted with, but being a handsome plant, it will no doubt, on account of its distinctness, meet with a considerable share of public favor.

The greatest peculiarity for which this plant is remarkable, is the absence of petals in the flowers, so that, in fact, the flowers consist simply of long tubes, divided at the lower extremity into four obtusely angular segments, beyond which the style, but not the stamens are protruded. At present, in a cultivated state, it assumes the form of a low, somewhat straggling shrub, with spreading branches; but Sir W. Hooker states, that in Peru, where it was originally observed in lofty mountains at Andimarca, it was found climbing on the trees, so that we may expect the straggling habit which has been manifested to become more fully confirmed and developed, as our acquaintance with it increases. It has however not yet been seen to exceed about two feet in height, and in this state the flowers quite conceal the stems, from the number in which they are produced; indeed, so freely does it produce its flowers, that small plants, scarcely more than six inches high, are found to flower freely.

The whole plant is more or less clothed with coarse pubescence; it has large leaves, of an acutely ovate figure, and purplish be-

neath, and pendulous apetalous (without petals) flowers, the calyx of which is very long—often six inches—cylindrical, a little widening upwards, and divided into four ovate segments; these flowers are each produced on a separate stalk, sometimes solitary, sometimes aggregated, also "among the terminal leaves, which are often so small as to give the appearance of terminal corymbs; at other times, the flowering branches are crowned with a tuft of leaves." The color of the flowers is a rosy red, paler towards the base of the tube, and also on the segments, which are slightly tipped with green. If, observes Sir W. Hooker, this be not the most brilliantly colored of *Fuchsias*, it certainly can boast the largest flowers, and it bears them more copiously than any other species.

Mr. W. Lobb, the collector to Messrs. Veitch, detected this plant growing in woods near Chasula, in Columbia, at an elevation of 5,000 feet above the sea; and it is through this source that it has been introduced to this country in a living state. Dried specimens have been for some time in Sir W. Hooker's herbarium.

In regard to cultivation, it will, doubtless, prove a hardy green-house species, the elevation of its natural habitat (5,000 feet) being sufficient to warrant this conclusion: there is indeed every reason to believe that it would succeed out of doors during the summer months. Like other species of similar habit, the present seems to be most fitted for a conservatory, where it might be either planted out, in the border, or grown into a large specimen in a pot. From the manner in which the blossoms of the plant are produced, it will be obvious that it is well adapted for growing into the form of a standard, from which the long dependent flowers would hang with good effect. Whatever beauty there may be in plants of small size, there can be no doubt that those which are grown into larger bushes will proportionately increase in beauty; such is the case with *F. fulgens*, and *F. corymbiflora*, the two kinds common in our gardens, to which in general characters this bears the greatest resemblance. It seems to bloom early in the summer.

It is hardly necessary to mention that a

coarse, rich loamy soil is most suited for Fuchsias; and that if full exposure to the light is secured to them, they will thrive best when treated on something like the large-shift system.

Fuchsias belong to the natural order Onagraceæ, the same order which includes the Enothera, and other garden flowers. In the Linnæan arrangement, they belong to Octandria monogynia.

HINTS ON THE RIPENING OF WINTER PEARS.

BY SAMUEL WALKER, ROXBURY.*

[MANY novices in the culture of the pear are disappointed in many of the new winter varieties; and chiefly because they are not aware that, to attain their proper flavor, they must be ripened off in a *high temperature*. We beg the attention of the uninitiated in these matters, to the excellent hints from our correspondent, SAMUEL WALKER, Esq., than whom no one is more familiar with the subject.—ED.]

THE increasing demand for fruit, and more particularly for autumn and winter pears, has caused frequent inquiries to be made by the cultivators of this delicious fruit, as to the best mode of keeping and ripening the different varieties for the table and for the market. This subject, at present, is but partially understood; but, with your permission, I will venture to offer a few crude hints, and all the practical experience I possess on the subject.

“To begin at the beginning,” I consider it very desirable that every fruit-grower should have a *Fruit-House*, or *Fruit-Rooms*, consisting of at least two apartments, viz: a *keeping* and a *ripening* room. For this purpose I would suggest an ornamental building of brick, stone or other material, so constructed as to keep out the frost, divided into two rooms of such size as may meet the wishes and wants of the cultivator.

The floor of the keeping-room to be of

brick or stone; the ripening-room floor to be of wood, if you please, covered with a carpet, and to render it comfortable and suitable for the purpose, a fire place to heat the apartment when necessary.

The same treatment will not, I believe, suit all the kinds of pears (maturing at the same season) whether they be autumn or winter varieties. For illustration, let us compare the *Chaumontel* and the *Vicar of Winkfield* (*Monsieur le Cure*;) the first will ripen when subjected to great changes and exposure to frost; indeed, it may be left upon the ground with only a slight covering of leaves, grass or other light substance, at times covered with snow, the thermometer varying from 10° above zero to summer heat, and still the ripening process advances, and is, in all probability, accelerated by these sudden changes until the fruit is nearly ripe, at which time, if the fruit is taken into a cold cellar for a few days, (if frozen put into some soil to take out the frost,) and then removed into the keeping-room, there boxed up with cotton batting, and then placed in the ripening apartment, the maturing process will be promoted until the fruit has acquired its highest state of perfection. These remarks, I have no doubt, will apply to other varieties, of which time and experience will give, to the close and attentive observer, further information on this important subject. I will, however, venture to

express an opinion that the *Bourre Rance* and *Easter Pear* may be put into this class.

On the contrary the *Vicar of Winkfield* belongs to a class of pears requiring a very different course of treatment. This variety should never be exposed to frost, but for late keeping it should be placed upon the floor of the keeping-room, and whenever the fruit is wanted for the table it should be put into tight boxes, wrapped up in cotton, and placed in the warmest part of the ripening-room, the temperature varying from 55° to 75° ; in this manner the fruit will be ripe in from fifteen to twenty days. Having thus attempted to show that the same treatment is not adapted for the ripening of all the varieties of the pear, (and this I have no doubt will apply to the apple,) I shall proceed to give my views as to the general treatment of autumn and winter pears.

All pears which come to maturity in the autumn and winter, should not be gathered until the fruit has attained its full growth, (the middle of October is about the season in the neighborhood of Boston.) This should be done by hand, some fine day when the fruit is perfectly dry, putting it away carefully into barrels,* buckets or boxes,† according to quantity, keeping each kind separate, labeling the same with its name, the day it was gathered and the sea-

son of its ripening. The fruit having been thus gathered and secured, it should be arranged in the *keeping-room* of the fruit-house, as the owner may think proper. The barrels may be placed upon the floor, the baskets hung up, and the boxes placed upon shelves. Where large quantities of any one kind are raised, bins may be proper.

The fruit being now placed in the *keeping-room*, care should be taken to keep the room cool, dark and dry; shutters and curtains should be provided for the windows, to close them up, during the day, if the weather is bright, dry and hot; at night, when the weather will permit, the thermometer not ranging below 30° , the windows may be all, or in part, left open for fresh air and ventilation. The windows and shutters should be closed early in the morning, to keep in the night air and to preserve the fruit. If mould or mildew should be seen upon the fruit, it should be removed with a dry cloth or silk handkerchief; if about the floor, or other part of the building, strew a small quantity of air slaked lime about the room.

As the period of ripening approaches, all the varieties should be examined; the fruit that shows signs of its soon coming to maturity should be carefully packed up with layers of cotton batting, in tight boxes, and in no case should the box be opened or the fruit unnecessarily exposed to the air. From the time fruit is gathered, until it is *fully ripe*, it should, in my opinion, be kept in close, dry vessels. The pears thus boxed up should be placed in the ripening-room, keeping the room at a temperature of from 55° to 75° of heat. As the fruit becomes ripe, send it to the table. When the fruit is intended for sale, it should be sent to market *a few days* before it is *fully ripe*.

SAMUEL WALKER.

Rosbury, Mass., Feb. 1847.

* All vessels used to keep fruit in should be perfectly dry, clean, sweet and tight. Barrels, after they have been used as "flour barrels," are not at all suited for fruit, unless well washed and dried, as the particles of flour left in the barrel will mould, and impart to the fruit an unpleasant odor and flavor. Fruit put into lime casks has kept well. Every thing in contact with fruit should be sweet and clean, and the vessel in which it is placed dry and tight. It should be handled or disturbed as little as possible.

† When fruit is put up into small boxes, to ripen, it may be wrapped up in cotton batting, but while it remains in the keeping-room, neither straw, paper or other like material should be placed with the fruit, as it is always more or less injurious.

A REVIEW OF OPINIONS ON PEAR TREE BLIGHT.

BY L. C. EATON, OF PROVIDENCE, R. I.

WHAT is the malady by which fruit trees are affected, called the *fire blight*? Before we examine for a cause to which to ascribe its origin, it is necessary to determine what are its peculiar symptoms; and until we do so, investigation will lead to no satisfactory results. The term blight, of itself, expresses no particular disease, and defines merely the blasting or withering of plants while in a state of growth. "What is called blight," says Forsyth, "is frequently no more than a weakness or distemper in trees. This is the case when trees against the same wall, and enjoying the same advantages in every respect, differ greatly in their health and vigor, the weak appearing to be continually blighted, whilst others remain in a flourishing condition. This very great difference in such circumstances can be attributed to the different constitutions of the trees, proceeding from a want of proper nourishment, or some bad qualities in the soil, some distemper in stocks, buds or scions, or mismanagement in the pruning, &c., all of which are productive of distemper in trees, of which they are with difficulty cured; "and he states that there is another sort of blight against which we know of no effectual remedy, called the *fire blast*." Trees sometimes perish by great heat, when accompanied by a severe drouth, and by cold even in the spring, when so rigorous as to destroy the foliage. A partial destruction or mutilation of the roots, deep planting, an uncongenial subsoil, cankers produced by bruises, neglect of cultivation, moss and vermin, do not unfrequently occasion disease having some of the marks characteristic of the *fire blight*;

and trees which have perished from either of these causes may have been supposed to have been affected by this malady. Different diseases have been confounded together, not simply by the inattentive, but by men of experience and investigation. JUDGE BUEL, in a communication to the *New-England Farmer*, in 1828, ascribes the *fire blight* to an insect, and refutes all theories attributing it to any other origin. He probably had only examined trees injured by the insect *Scolytus pyri*, described by PROFESSOR PECK. An article from a correspondent in New Jersey, referring to and refuting the opinion expressed by JUDGE BUEL, was published the next year in the same paper. "It has been my object," he says, "for many years, to ascertain the cause of this destructive disease, but vigilant as I have been and still am, I have never yet detected any insect in the act of puncturing a tree, so as to cause *fire blight*." The editor of the *Genesee Farmer* in 1833, discusses this question, and after reviewing the opinions of different observers, gives his views, which coincide with those of JUDGE BUEL. It does not seem to have been conjectured by either of these writers, that there were or might be two distinct diseases originating from different causes, and producing the same or similar results. Though they are very dissimilar, yet the one, we believe, is often mistaken for the other. DOWNING, in his treatise upon Fruit Trees, has described what are the peculiar symptoms of each.

The origin of the *fire blight* has been much discussed, and various theories have from time to time been advanced, meeting

with a share of support and approbation. It has been ascribed to "electricity and atmospheric influence," "to a stroke of the sun," "to old age or long duration of varieties," "to a sudden freezing of the bark," and "to an epidemic transmitted from place to place by the air."

We would, briefly as possible, examine these several opinions.

The article referred to, published in the *New-England Farmer* in 1829, is written with considerable ability, and as it embraces a statement of facts, important in our inquiries, which may seem to warrant the belief of the writer that electricity or atmospheric influence is the cause of the disease, we will give extracts of some length from it. "An exotic pear, such as the *Vergalouse*, the *Beurre*, the *St. Germain*, or the *D'Anche*, grows very luxuriantly in our climate. They have the capacity of attracting a greater quantity of fluid nutriment than those trees which are indigenous. The fire blight occurs more frequently after a summer shower in July or August, and during the sunshine. A shower falling on any plant, whilst the sun shines fiercely, is always more or less injurious." "I have actually seen the end of a limb perish with fire blight before my eyes whilst examining it. I once stood under the shade of a fine *St. Germain*, while I was directing my gardener how to amputate the limb of a similar tree, which stood about ten feet from me; I discovered the blight immediately after one of those hot showers; and as is my constant practice, I hastened to the tree, that the injured limb might be instantly separated. Whilst I stood under the *St. Germain* before mentioned, my eye rested on the horizontal branch before me, and to my surprise I saw the leaves change color from a dingy yellow to a dark brown! I

had the limb cut off far below the blight and saved the tree, as I did the one opposite to me."

"While the sap of plants is confined within the proper vessels, it possesses the healthy qualities necessary to it; but if a rupture takes place at the tender extremities of the limbs, or should no rupture occur, but merely a detention or congestion of sap be the consequence of the powerful rarification, which the hot moist atmosphere causes, the sap, by coming and remaining more immediately in contact with external gases, will acquire deleterious qualities wholly unfit for the uses of the plant. Native pears are very seldom touched by this malady, because, in our apprehension, the sap vessels are capable of resisting the various changes of our atmosphere. This is not the case, however, with all our fruit trees, even of those which have for centuries been acclimated. The quince trees, for instance, are attacked by a species of fire blight, which often injures them very materially, and I have seen the young wood or twigs of the apple tree scathed as if by lightning. In truth the electric fluid seems to be the most likely agent to produce a phenomenon of the kind. When the air is charged with electric matter, the acetary fermentation of the vegetable fluids is more active, and they undergo a change at such times. This is a case well known even to the ignorant, who usually attribute it to thunder. Congestion does not always take place at the extremities of all plants. In the cherry and plum trees, it is confined entirely to the bark of the trunk or to the thickest part of the principal limbs. Tall trees are more subject to this disease of the bark, than those which have short bodies or trunks. It proves therefore that a highly rarified atmosphere, accompanied by show-

ers during the hottest period of the day, is injurious to the sap, as it rises to the most succulent parts of the limbs, and to the exposed surface of the bark of the cherry or plum."

Now it seems to us very evident that if the electric fluid, was the cause of the disease, it would act in the first place upon the leaves, they being the most delicate and exposed organs, and the extremities would invariably manifest the injury sooner than the "trunk or the thickest part of the limbs." There is no reason, certainly, why it should affect different kinds of fruit in different parts, in the manner supposed; and this "agent," we should presume, would be more likely to produce its effects upon tall trees than those of lesser growth. "A highly rarified atmosphere" would be most detrimental, where its circulation is less free, or more pent in by vegetation, and the trunks of those having short bodies, and limbs spreading more horizontally, would be as liable to suffer, as those having a more erect growth. If the facts are correctly stated, they are to be ascribed to a more consistent cause. Some vegetable fluids, extracted from the fruit or the plant, or existing in them in a state of partial decay, undergo fermentation, but nothing similar takes place with the sap of a healthy tree, and though the fermentation may be greater, when the air is charged with electric matters, there is no connection between the effect, and that which is produced in the sap of a tree when attacked by disease. The premises would not warrant the conclusions. The circumstance related as to the change in the appearance of a "fine St. Germain," which occurred under the eye of the observer, and to his great surprise, furnishes no evidence that the attack of the disease was so sudden, and its effects so decisive as he

supposed. Indeed, the statement as to color, shows that the tree had been diseased for some time previously. He saw the leaves change from "a dingy yellow to a dark brown!" "A dingy yellow" is not the color of the leaves of a healthy tree, and when they present that appearance in mid-summer, it is generally the precursor of speedy decay. Those who have observed the fire blight only at that stage when, though the tree may have previously had, upon slight examination, the appearance of health, the fruit and leaves begin to perish, might well suppose that it had but just commenced its attacks, whilst in fact, it had existed for months, and was manifesting its final and fatal effects. "A shower falling upon any plant, when the sun shines fiercely," is frequently injurious, and produces a more decided and sudden change in the foliage of that which is diseased than of the healthy.

THACHER mentions, in his *Orchardist*, that Mr. COOPER, of New-Jersey, discovered that iron hoops hung upon the branches of his trees, invariably preserved them from blight. This remedy is somewhat singular, and its success would seem to require some additional confirmation, though so great is said to be the benefit derived by pear trees from iron, that we are prepared to hear that it will produce any result desirable; but if electricity is the cause which produces the disease, it would be difficult to explain in what manner that material should preserve the tree from harm, which most attracts it.

It is true, we believe, that the disease is less destructive to native varieties than to those of foreign origin; and such being the case, we should endeavor to take some advantage of it. Native pears are generally accidental seedlings, mature their wood comparatively early, and are hardy; the fo-

reign are mostly cross bred seedlings, and are less hardy, and when reared by the method adopted by VAN MONS, very tender. Most of our foreign pears came from countries where the temperature is more equable than here, and are unsuited, in a greater or less degree, to our soil and climate. A "want of constitutional fitness" may exist, to which little or no attention is paid. In England, regard is had to the habit of the variety, whether it is of strong or weak growth, whether hardy or tender, whether it will flourish as a standard or requires the aid of a wall. Inquiries of this kind, though of greater importance to us, variable as our climate is, are seldom made here. A great eagerness has prevailed to obtain all the new kinds of foreign origin. This might be well enough, provided it does not lead us to overlook our native varieties,* and undervalue their peculiar merits for general cultivation. What is true of the apple, we believe to be equally true of the pear, that its varieties flourish more perfectly in the district and country where they originate. Many of those of high repute abroad, which have come to us, have disappointed our expectations, and are equalled, if not surpassed, by many which have originated here, which in some instances have failed to attract the attention of cultivators for years. Let the amateur consult his own taste and pleasure, and try what experiments he chooses; but for others it is more desirable to rear such trees as are most hardy, and will produce fair crops of good fruit; and we believe they would meet with less disappointment and more uniform success, if they paid greater attention to the culture of our native varieties.

The opinion, ascribing the disease to a stroke of the sun, is of an older date. It is mentioned by FORSYTH and in MILLER's *Gardener's Dictionary*. FORSYTH says, "there is another source of blight, that sometimes happens pretty late in the spring, and is called fire-blast. This is generally thought to be occasioned by certain transparent flying vapors, which may sometimes take such forms as to converge the sun's rays in a manner of a burning glass, so as to scorch the plants they fall upon, and this in a greater or less degree in proportion to their convergency. This generally takes place in close plantations;" and he recommends that a clear healthy situation be selected, and the trees planted at such distances as to give free admission to the air. PRINCE, in his treatise on trees, remarks, that "the pear is subject to one malady peculiar to itself, commonly called the fire blight, or Brulere, which attacks trees, generally commencing at the extremities of the branches and extending downwards. This is caused by a stroke of the sun, which extracts the sap from the uppermost branches of the tree, or from such as are most exposed to its influence, with more rapidity than it can be replaced; or from powerful rays of the sun heating the sap," and he recommends, that the trees should be planted in pear orchards much closer than in those of the apple.

Observation has established the fact that the disease does not commence at the "top or extremity," and when the trees are in foliage, but manifests itself by black and withered patches of bark upon the trunks or limbs, before a single leaf appears; and we hardly credit that any "hollow clouds" should be so actuated by malice aforethought as to converge the sun's rays to fall particularly upon close plantations. The following objections against this theory are by

*The past season has brought into notice here three excellent pears, originating in this State: the *Pratt*, and *Knight's*, and *Burr's* seedlings; the two former of which have been in bearing many years.

JUDGE BUEL: "I do not believe it is produced by the sun; because its attacks are indiscriminate, where the sun's rays are obstructed by foliage as well as where exposed to its rays; on the north as well as the south, on horizontal as well as perpendicular shoots; and the under as well as upper side."*

Culture of Tender Fruits in Cold Climates.

BY J. J. THOMAS, MACEDON, N. Y.

It is familiar to horticulturists, that warm low valleys, are more subject to night frosts than more elevated localities. Objects at the surface of the earth become chilled by the radiation of heat to the clear sky above, and cool by contact the surrounding air,—which thus becoming heavier, rolls down the sides of declivities, and settles like the waters of a lake in the lowest troughs. This effect is farther increased by the stillness which prevails in those sheltered places, favoring the more rapid cooling, by radiation, of the exposed surfaces; while on hills the equilibrium is partially restored by the currents of wind. Independently of these causes, vegetation is more likely to suffer in such places from the succulent or unripened growth, incident to the warmer position, and to the richer soil which more usually accumulates at the bottoms of valleys. The mucky soil also radiates heat more rapidly from its surface. The warmth in valleys, during the milder weather of winter, often swells fruit-buds, and severe cold following, destroys them. Higher and more bleak localities are not exposed to these variations, but are more uniformly cold; hence, for these five different reasons, such places are usually much the best for raising tender fruits.

These facts are familiar to many, but still are not so generally appreciated nor applied in practice, as they might be in many instances to very great advantage, in selecting grounds for orchards and gardens. Very

erroneous conclusions even, have been adopted in consequence; and large parts of the Northern States are destitute of the finest fruits, from mistaken notions as to the practicability of their culture, or of their endurance of the climate.

Instances, showing in a strong light, the principles already alluded to, may be of use to those who have given little attention to the subject.

The existence of colder air in valleys, on still, clear nights, has been obvious to every observing person riding rapidly over a rolling or broken face of country. The thermometer has often shown a difference of many degrees between a creek bottom and a neighboring hill not fifty feet high. A very striking proof of this tendency was exhibited, at the time of a severe night frost, early in summer. The young leaves of the hickory had but partially expanded, and the fresh shoots, a few inches long, were succulent and tender. A few trees stood in a hollow about twenty feet deep, and after the frost all the leaves and fresh branches on the lower parts of the trees were black and dead, while all above the surface of this lake of cold air, were green and uninjured.

Many years ago, the writer attempted the cultivation of young peach trees, on a rich soil near the bottom of a valley. But every winter the newly set buds were destroyed,

* To be continued next month

or not one in fifty escaped, and one-half of the young branches were often killed. Learning the cause, the trees were removed to an adjacent elevation fifty feet higher, when the difficulty was at once obviated.

In the winter of 1845-6, when the severity of cold on a clear night sunk the thermometer several degrees below zero, after the peach buds had been swelled by a few warm days, trees which stood on a hill thirty feet higher than the neighboring creek valley, lost nine-tenths of their blossoms, while on another hill twenty-feet still higher, nine-tenths escaped. The lake of cold air which covered the smaller hill, did not reach the top of the larger.

In a large portion of the State of New-York, more especially in the region of the southern tier of counties, nearly all attempts to raise the tender fruits appear to have been relinquished. The inhabitants of the larger villages and their vicinity, places mostly situated at the bottoms of deep valleys, being persons of more enterprize and means, have tried the experiment—and for obvious causes have failed—and hence the conclusion that the climate was necessarily fatal. But there is strong reason to believe, that *through all the southern counties of New-York, extending from Lake Erie to the Hudson, peaches may be raised with little difficulty*, by a proper selection of locality, and by an observance of the principles already pointed out;—that is, by selecting elevated spots, and dry and firm soils, and avoiding mucky ground in valleys. In the town of Spencer in Tioga county, N. Y., near the head of Cayuga inlet, peaches have withstood the climate and done well, at an elevation of 700 feet above Cayuga lake. A striking instance was shown the writer last summer in Cohocton, Steuben county. The river valley in that town, though many

hundred feet above the level of the sea, is much lower than the surrounding country, being flanked by hills about 500 feet high. In the valley, the peach can not be cultivated, the trees having been completely killed to the ground, in winter. But on one of the neighboring hills, 500 feet above, and probably 1200 feet above the sea, an orchard has been planted on good soil, which entirely escapes, and yields regular crops of fruit. In the northeastern part of Pennsylvania, probably twelve or fifteen hundred feet above the level of the ocean, in the summer of 1835, after one of the severest winters for twenty years, the only two peach trees observed in traveling many miles, were full of peaches; while the same winter, in Stroudsburg valley, a large tree was noticed killed down to the ground. While those hills are often covered with snow throughout the winter, the valleys are subjected to thaws, and hence become more unfavorable to tender vegetation.

Most of these cases show the great advantages of elevated sites. A dry and firm soil is, however, quite important. The influence of a compact knoll, rising scarcely above the rest of the field, has saved the corn which grew upon it; while on the more mucky and spongy portions of the rest of the field, radiating heat more freely, the crop has been destroyed. A successful cultivator of drained swamps, told me he could never plant such lands with corn safely till two or three weeks after the usual time of planting in common soils on an equal level. These influences apply with greater force to tender trees. Succulence and lateness of growth, caused by such soils, are always unfavorable to the endurance of cold; while a hard, dry soil, at the same time that it produces a less rapid growth, causes also an earlier cessation, and the young wood becomes matured and harden-

ed before severe frosts. "Many kinds of herbaceous plants and small shrubs," says A. J. DOWNING,* "may be naturalized on *dry rock-work*, or aggregations of stones mingled with soil, where they are found to thrive perfectly. We observed in the Botanic Garden at Cambridge, an *Azalea indica* and a species of *Erica*, that had braved the exceedingly low temperature of 30 degrees below zero, the past winter, having been planted several years previously in a mass of rock-work, where they had annually matured their wood in the most perfect manner."† The succesful cultivation of the peach and grape, on the gently swelling hills called *mounds*, in the westeru prairies, while the crops are destroyed by frost on other lands, more fertile, affords another example. In Lycoming county, Pa., on the banks of the Loyalsock, a creek so rapid that no muck is deposited, but fine dry soil, peaches have been raised, though the cold is often intense.

It will be observed that in the preceding remarks, the influence of *large bodies of un-*

freezing water, in softening the severity of the cold, in chilling the dangerous warm air which starts the buds in winter, and which afford great protection by the screen of fog which they spread before the morning sun, has not been taken into account. This influence, where it exists, will, in some cases, reverse some of the preceding rules.

J. J. THOMAS.

Macedon, 3 mo., 1847.

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[We commend the foregoing sound advice to planters of fruit, in all districts of country where the effects of frost are disastrous. In traveling through part of this State, in the summer of 1836, which followed the coldest winter known in New-York for many years, we saw, continually, an abundance of facts verifying Mr. THOMAS' observations. That season was one remarkable every where for the failure of the peach crop, in consequence of the excessive cold of the previous winter—yet we noticed that on the high ridges and mountain ranges, the trees had escaped all injury, and bore abundant crops.—ED.]

Notes on some Select Annuals.

BY A DISCIPLE OF FLORA, NEW-YORK.

DEAR SIR—Just at this season, no doubt, some of your readers, who may be novices in floriculture, will be looking over the seedsmen's catalogues, in the pleasing hope of selecting something to give gaiety, brightness and profusion of blossom to their flower gardens. I remember how much I used to be puzzled with fine botanical names, and at last selected in a good deal the same way that I suppose a person buys a ticket—trust-

ing to good fortune a great deal, and to knowledge of the matter in hand very little. The result is often very similar in both cases. It is by no means an uncommon occurrence, when you think you have purchased the seed of some new annual flower, the Latin name of which gives you not even a glimmering notion of its character, to find that the plants produced have coarse leaves, and an insignificant bloom. I have, therefore, thought I might use my little experience to the advantage of those of your readers who

* In Hovey's Magazine.

† The skillful cultivator will avoid all *unnecessary* deprivation of *fertility*, if he regards the size and quality of his fruit.

are yet *beginners* in gardening matters, by giving them a select list of about *forty* of the best annuals, that I have tried and found really handsome, easily grown, and well worthy of cultivation.

ANAGALLIS INDICA, *Indian Anagallis*.—Dwarf, trailing habit, flowers in July and August. Flowers blue.

AGERATUM MEXICANUM, *Mexican Ageratum*.—Upright habit, height a foot and a half. July and Aug. Flowers pale blue.

ARGEMONE GRANDIFLORA, *Large-flowered Argemone*.—Habit branching, thistle-like leaves, large poppy-like flowers, 2 ft. high. August.

BARTONIA AUREA, *Golden Bartonia*.—Habit spreading, large brilliant golden blossoms, suitable for beds or masses, 1 ft. high. August.

BRACHYCOME IBERIDIFOLIA, *Swan Daisy*.—Habit trailing, leaves small, height six inches, color changes blue and pink to white. July to Sept.

CACALIA COCCINEA, *Scarlet-tassel Flower*.—Habit dwarf-tufted, blossoms tufted like little tassels, orange-scarlet, one foot high. July to October.

CALANDRINA SPECIOSA, *Beautiful Calandrina*.—Habit trailing, flowers bright rose-color, brilliant in the sun, height 6 inches. July and August.

CALENDULA OFFICINALIS, *English Pot-Marigold*.—The prettiest and dwarfest of all marigolds; always in bloom, makes a good mass, one foot high. July till Nov.

CALLIOPSIS BICOLOR, *Golden Coreopsis*.—Habit erect, branched, flower yellow with dark brown centre, 2 feet. July to Oct.

CALLISTEMMA HORTENSE, *China Aster*.—Well known; some of the double-quilled sorts, called *German Asters* (of many colors,) are superb; 1 foot. Aug. to Sept.

CLARKIA ELEGANS, *Elegant Clarkia*.—Habit branching, flowers delicate and pretty, 1 foot high. June and July. Should be sown very early, or in the fall previous.

COLLINSIA BICOLOR, *Two-colored Collinsia*.—Habit erect, flowers numerous and pretty. June and July. White and lilac.

COLLINSIA GRANDIFLORA, *Large-flowered Collinsia*.—More dwarf and spreading than the last; flowers blue and purple; one foot high; makes a pretty mass.

CONVOLVULUS MINOR, *Dwarf Convolvulus*.—Habit spreading or trailing; flowers like little "morning glories," particolored, blue, white, and yellow; one foot. July to Sept.

DELPHINIUM AJACIS, *Double dwarf Larkspur*.—Erect; flowers nearly as handsome as hyacinths; of various shades—white, purple, rose, blue, &c.; Should be sown in September to do finely; one foot. July.

ERYSIMUM PEROFFSKIANUM, *Palestine Mustard*.

—Erect, showy; deep orange blossoms, like single wall-flowers; makes a rich mass. June.

ESCHOLTZIA CALIFORNICA, *Californian Poppy*.—Habit dwarfish and spreading; blooms all summer; flowers very glossy, bright yellow; one foot; makes a good mass. (E. *CROCEA* is deep orange-colored.)

EUTOCA VISCIDA, *Viscid Euloca*.—Habit erect; branching; flowers sapphire blue; height one foot. July and Aug.

GILIA TRICOLOR, *Three-colored Gilia*.—Pretty; habit erect; fine leaves; flowers purplish or white, with dark eye. June, July.

GILIA CAPITATA, *Blue Gilia*.—Habit branching; flowers small, in dense heads, pale blue; two feet. July to Sept.

GYPSOPHILA ELEGANS, *Elegant Gypsophila*.—Pretty; dwarfish habit, trailing; flowers numerous, small, pale pink; six inches. June, July.

HELICHRYSUM MACRANTHUM, *Large Everlasting Flower*.—Habit erect; flowers white, tipped with red; two feet. July to Oct.

HIBISCUS AFRICANUS, *African Hibiscus*.—Erect, branching; large mallow-like blossom, cream with rich brown centre; one and a half feet. July to Oct.

IPOMEA QUAMOCLIT, *Cypress Vine*.—One of the most delicate and pretty climbers; flowers like crimson stars; 8 feet. Aug. Nov.

IBERIS ODORATA, *Candy Tuft*.—Branching; there are two sorts, white and purple; both pretty, and abundant bloomers; one foot. June, July.

KONGIA MARATIMA, *Sweet Alyssum*.—Habit resembles mignonette; abundance of small white flowers from June to Nov.; six inches; makes a pretty mass.

LIPTOSIPHON DEMI-FLORUS, *Close-flowered Liptosiphon*.—Habit dwarf, slender; flowers rosy lilac; one foot. July. (Should be planted early.)

LUPINUS NANUS, *Dwarf Lupin*.—Erect; purple and blue; six inches. July to Sept.

MALOPE GRANDIFLORA, *Large-flowered Malope*.—Habit erect; flowers mallow-like, 3-lobed, large and pretty; two feet. July and Aug.

NEMOPHILA INSIGNIS, *Beautiful Nemophila*.—Habit dwarf, spreading; flowers like small cups, delicate blue and white; makes a pretty bed; six inches. June.

PETUNIA PHENICIA, *Petunias*.—Several colors, from white to rich purple; makes rich ever-blooming masses; one foot. June to Nov.

PHLOX DRUMMONDII, *Drummond's Phlox*.—Habit dwarfish, spreading; charming for masses or beds; always in bloom; varies in shade from rose to purple; one foot high.

PORTULACCA SPLENDENS, *Splendid Portulacca*.—Dwarf, trailing; leaves small; flowers large, rosy crimson; makes a rich bed; six inches. July to October.

PORTULACCA THELLUSONI, *Scarlet Portulacca*.—

Exactly like the last, but with scarlet blossoms. July to October.

SCHISANTHUS PINNATUS, *Wing-leaved Schisanthus*.—Erect, branching; flowers prettily cut, blue, purple, and yellow; one and a half feet. July and August.

SILENE PENDULA, *Pendulous Catch-fly*.—Dwarf, bushy habit; flowers pink-like; blooms a great deal. June to Aug.

TROPEOLUM ADUNCUM, *Canary-bird Flower*.—A climber; curious and pretty; light yellow blossom; grows freely and blooms abundantly; 10 feet July to Sept.

Yours, &c.,

A DISCIPLE OF FLORA.

New-York, March, 1847.

Action of the Salts of Iron on Vegetation.

BY ADOLPHUS BROGNIART, MEMBER OF THE ACADEMY OF SCIENCES, PARIS.

Translated from the REVUE HORTICOLE for this Journal.

MEN of science and agriculturists have not hitherto coincided in opinion regarding the action of the Salts of Iron on vegetation. We are indebted to EUSEBE GRIS, Professor of Chemistry at Chatillon (Coté d'Or,) for numerous experiments, which are quite conclusive. To enlighten our readers respecting the benefits derivable from the Salts of Iron, especially sulphate of iron, when applied to diseased plants, we have concluded to submit to their inspection the report made by MESSRS. PAYEN and ADOLPHE BROGNIART to the *Central Society of Agriculture*.

"The *Central Society of Agriculture* directed Mr. PAYEN and myself, to report on the communications of M. EUSEBE GRIS, in relation to his experiments concerning the action of the Salts of Iron on vegetation. We have repeated the most of these experiments, and varied them in order to ascertain the rationale or mode of action of these salts, while watching their effects on the plants of different families in different states of health. These numerous and protracted trials have created the delay of the report due to the society.

"We should prefer to modify some of these experiments, to extend their number, and to vary the attending circumstances; but such as we have made, seem sufficient to inspire us with great confidence in the results announced by M. GRIS, in the two pamphlets he has published on this subject; and which, added to our results, obtained according to his indications, will enable others to appreciate the researches of their author.

"These researches comprise:

"1st. The influence of the different Salts of Iron (sulphate, chlorate and nitrate,) applied in solution to the roots of plants affected with a disease known to cultivators as *chlorosis*, or diseased condition of the foliage,* which consists of a defect of the green coloring matter of the leaves, and in the yellowness or whiteness of these organs;

"2d. The direct action of these same salts, applied in weak solution, to the diseased leaves themselves;

"3d. The action of these salts on healthy plants.

"The first experiments of M. GRIS regarded delicate, diseased plants, whose discolored, white or yellow leaves indicated a radical change in the organization of the interstitial base, structure or *parenchyma* of the leaf; a malady, which affects certain plants, as the *Hydrangea*, *Calceolarias*, *Primroses* and *Geraniums*, and which almost always induces a protracted decay and final death of the plant, unless the soil in which it is cultivated is changed. We must not confound this modification of tissue, which exhibits itself in a plant which has been healthy for years previous, with those modifications of permanent colorings, which produce the stripes or marblings in many plants that are cultivated for the sake of the striking and odd contrast of the discolored with the adjoining parts, the green color of which equals in intensity that of a healthy plant. These stripes are varieties

* Yellows of this country?—TRANSLATOR.

of organic maladies peculiar to the individual plant, which seem to be, in general, inherent to the individual structure, and are, like it, multiplied by grafts and cuttings.

"These plants are not affected by the temporary changes of an undoubted disease, and the term *chlorosis*, and the experiments of M. GRIS, are in no way applicable to them; their pale or yellow stripes derived no change from the action of the Salts of Iron.

"The chlorotic plants, on the contrary, cultivated in pots, and watered with a solution of the sulphate of iron, containing from $2\frac{1}{2}$ to 5 drams of this salt to a quart of water, have, in almost every instance, after two, three or four waterings, gradually recovered their natural green color, the quantity of solution applied to each one varying from half a gill to a pint, according to the size of the pot in which the plant is cultivated, and the strength of the plant itself; but the effect has been more or less prompt and more or less marked according to the nature of the plant.

"Thus a very sickly *chlorotic* Geranium, conjointly with a *Calceolaria excelsa*, *Stachys mollissima* and *Malva capensis*, in the same condition, derived a prompt effect from three waterings, and entirely recovered its color at the end of three weeks; three other plants, *Satureia*, *Diosma* and *Malaleuca*, alike quite yellow, acquired a return of natural color more sluggishly, a beautiful green being developed in about two months; a *Pimelea*, on the contrary, regained its color imperfectly, and many of its leaves still remain yellow.

"It is worthy of remark, that if the parenchyma, during the progressive functional changes of the plant, becomes so attenuated that the leaf is almost transparent and on the point of withering, the susceptibility of being made green ceases, and the favorable influence of ferruginous solutions can only be manifested on the new leaves that may be developed.

"A plant, cultivated in the open ground, in the *Jardin des Plants*, offered a striking illustration of this fact: this was a vigorous bush of a *Napæa levis*, so diseased in the month of May, that its whitish-yellow, thin, and almost transparent leaves, were partly

crisped and desiccated, and its buds were as white as the centre of a cultivated lettuce; a solution of nearly one dram of sulphate of iron in three gills of water, twice applied, sufficed to indicate a change in the color of the leaves not too much withered; a third and more liberal watering restored vigor and natural color to most of the shoots; but this quantity was not sufficient to affect permanently so large a bush, presenting more than thirty branches, so that its leaves are already becoming marbled with yellow.

"Plants in the open ground are not favorably situated to offer *uniformly* certain results; the absorption by the roots being far from satisfactory, which may be partly attributable to the extension of their roots, and partly to the imperfect absorption of the liquid, which becomes diffused, and consequently enfeebled.

"It is probable, when the necessary proportions are understood, especially for perennial plants formed with vigorous heads, that the same conclusions will be reached as from plants in pots.

"We should not, indeed, question the action of the solutions of sulphate of iron, when applied to *chlorotic* plants; but does the sulphate of iron act directly, as a ferruginous salt, or, re-acting on the substances which compose the soil, does it produce its effect as a sulphate of lime? This objection has been urged to M. GRIS, and he has sought to answer it by various experiments. He affirms that he has obtained like results from solutions of the chlorate and of the nitrate of iron, while the sulphate of lime, on the contrary, effected no change in the color of chlorotic plants.

"Many of the plants tried by him, and many of those also submitted to the experiments of your commissioners, were cultivated in pure peat-earth, (*terre de bruyère pure*), and the most signal results were observed, although the soil was almost entirely free from calcareous matter.

"Finally, the application of the ferruginous solutions directly to the chlorotic leaves themselves, by bathing, seems to resolve every doubt as to their positive action on the tissue of the leaf.

"This process, which M. GRIS practiced subsequent to that of absorption by the roots,

requires the employment of much feeble solutions, in the proportion of one-fourth to one-half a dram of the sulphate of iron to a quart of water; this solution may be applied, either partially or generally, by means of a brush or sponge, to the upper or lower surfaces of the leaves. If we experiment more liberally, the excess of the solution applied to the leaves, if allowed to moisten the earth, may be absorbed by the roots.

"A solution more concentrated, almost always affects the leaves, and fixes brown spots on them.

"The action of the solutions is more or less rapid, according to the nature of the leaves and the permeability of the epidermis or outer surfaces, and, also, according to the affinity or repulsive quality of the surface of the leaves; in which latter case the absorption can only be effected by rendering the liquid more viscid and consequently more adhesive to these surfaces.

"The soft leaves, like those of the scarlet geranium, *Pelargonium inquinans*, the primrose, *Primula elatior*, and artemisia, *Chrysanthemum indicum*, are very sensitive to the action of the Salts of Iron; a single application producing, at the end of two or three days, a renewal of green to the leaf wherever touched by the solution; and, in an example of a very chlorotic geranium, every line painted on the surface of the leaf by a brush was rendered beautifully distinct through the intensity of the green color.

"This action of v. ry diluted solutions of sulphate of iron on the chlorotic leaves of plants, belonging to a large number of different families, as the *vines* and *pears*, which are subject to this malady, is an unquestionable fact which M. GRIS has sustained by repeated proofs, and which your commissioners have confirmed on a great number of plants.

"Here, none of the reactions peculiar to the soil take place; the solution is directly absorbed by the organ which is to be modified; it is absorbed like every other aqueous solution; if it be too concentrated, it changes the tissue; if it be weak, it acts favorably on the diseased substance. It is to be farther remarked, while the leaves are renewing their color by the absorption of the Salts of Iron through the roots, that the parts adja-

cent to the nerves of the leaves are primarily colored, and the networks of the leaves secondarily, in the most distinct manner; on the contrary, when the coloring of the chlorotic leaves is the result of absorption through their surfaces, the portions colored are distributed in patches or spots bearing no relation to the nerves of the leaves.

"M. GOEPPERT had already observed similar results in the poisoning of plants by Prussic acid, accordingly as the impression was produced by application to the roots, or to the epidermis of the leaves in a state of vapor.

"It is quite important to demonstrate the superiority of the action of the salts of iron on vegetables, obtained by absorption through the epidermis of the leaves, as this method will be practically preferable to that of absorption by the roots, especially for trees, the absorbing extremities of whose roots extend too far or almost beyond reach, unless an enormous quantity of the solution is employed; whilst a weak solution, thrown over the foliage by means of a syringe, will, after two, three or four sprinklings, restore the leaves to their normal state, by producing, at first, green streaks, which gradually extend over the whole surface of the leaf, with judicious and continued applications.

"M. GRIS assures us that he has derived excellent results from this process applied to very sickly chlorotic pear trees, (trained *en quenouille*;) we have not had occasion to test it on these trees.

"It is moreover probable that the season, during which the waterings, sprinklings or lotions, are applied, has an important influence on their action; for adult leaves, especially old and tough, appear to be less sensitive to the influence of this agent, and less susceptible of becoming green than leaves still young and tender.

"We have, also, already indicated the great difference in the action, more or less prompt and more or less marked, depending upon the texture and consistency of the leaves themselves; the leaves, with a very penetrable covering or epidermis and sponge tissue, almost immediately and with facility experience the influence of the lotions; while others, on the contrary, with

a dry or tough epidermis, and a thicker tissue, become green only after repeated bathings.

"There are then, under these different relations, studies of individual and specific details to be made, which will direct us in the application of this remedy to the different forms of vegetable maladies; but we cannot doubt the action of the salts of iron, more particularly of the sulphate of iron, on plants affected with this diseased discoloration of their green parts, designated as the *vegetable chlorosis*, nor its influence in re-establishing, in time, the natural color of these organs, (unless the malady has produced a disorganization of its tissue,) and thence, finally, confirming the natural color, in the new parts which may be developed. Under this influence and its consecutive changes, we may see the plant recover all the characteristics which indicate sound health.

"As to the action of the salts of iron on healthy plants, or on those in their natural state, it is much more difficult to determine it by the experiments of the garden, and the results we have obtained are not sufficiently distinct to allow us to consider the question as settled.

"M. GRIS has cited many examples of vegetables and grain, watered with ferruginous solutions, particularly that of the sulphate of iron, which appeared more vigorous and presented a greater weight than analogous plants which had not received these solutions.

"We have repeated these experiments on seeds sown this spring, both in the open ground and in pots, and, in this instance, in different kinds of earth; in the open ground we have sown spring corn, oats, peas, beets, buckwheat, cabbages and turnips; a part of each one of these sowings was watered with a solution of five drams to the quart, and subsequently of a dram and a half to the quart, in order that the leaves which could not escape soaking should not be injured. These waterings were repeated five or six times during the months of June and July, without producing any perceptible difference to the sight.

"We have sown in pots, barley, (*Hordeum hexastichum*), oats, (*Avena sativa*), pink

clover, (*Trifolium incarnatum*), rape, (*Brassica napus*), peppergrass, (*Lepidum sativum*), buckwheat, (*Polygonum jugopyrum*), and love-lies-bleeding, (*Amaranthus caudatus*); two pots of each one of these plants contained the ordinary earth of the garden; two peat soil; and two were of siliceous sand; each pot having a mouth of about seven inches and containing eight or ten roots of each plant. Every other pot was moistened with pure water, and every other residuary one was watered, from time to time, with a solution of $2\frac{1}{2}$ drams of sulphate of iron in a quart of water, of which a gill was at first applied to each pot, and subsequently two or three gills.

"There was, in general, very little difference between the two series, especially of the plants in the ordinary earth; the plants sown in the heath mould, and especially those in the sand, generally appeared to be stronger when they were watered with the sulphate of iron solution: this result was quite marked in regard to the buckwheat and cruciform plants.

"If, then, we are to regard experiment conducted on so small a scale, with some attending accidental circumstances of decided importance, it would seem that the action of the sulphate of iron would prove favorable on thin and sandy soils; but we cite this result, with our declared restrictions, merely to indicate the interest which more extended experiments might develop in sterile and sandy soils, by means of feeble solutions ($\frac{1}{2}$ or 1 dram to the quart, so as not to injure the leaves,) repeated two or three times, and in such quantity that every square yard should every time receive from three to four quarts of the solution.

"It is evident that, as this part of the question, so eminently interesting in an agricultural point of view, is the least advanced, that renewed experiments are needed; and with these M. GRIS has been occupied during the current year.

"The results of the researches to which M. GRIS has devoted himself with so much zeal and perseverance for many years, appear to be these:

"1. That the salts of iron, (sulphate, nitrate, chlorate and acetate,) whether absorbed into plants by the roots or the epidermis

of the leaves, exert a specific action on the coloring matter of the diseased or altered leaves of plants, denominated *chlorotic*; that they restore the natural color of these organs, and thus contribute to re-establish the health of the plant, a result which is obtained quite independently of a union of these acids with other bases, as lime or soda; and that, in this respect, waterings and sprinklings of suitable solutions of these salts can be very usefully employed in horticulture, and also for general cultivation on vegetation subject to this form of disease, such as *vines*, *pears* and other fruit trees.

"2. That these salts, although their action is not as prompt and as apparent on the plant in its natural healthy state, appear in many cases to operate beneficially on its growth; that different circumstances, consisting chiefly in the nature of the soil and the plant, particularly merit the specific attention of agriculturists; and that new experiments are necessary to determine to what extent the salts may be available in agriculture, although the use of pyritous ashes, already employed in many localities, offers a favorable indication for the employment of sulphate of iron under other circumstances.

"The extended labors of M. GRIS on this subject, the numerous experiments to which he has devoted himself to prove the facts we have collected, the knowledge of which he has given proof, and the perseverance with which, for many years, he pursued a result which seemed to him important, and which he has in reality attained, appear to us to merit in a high degree the encouragement of the Society, and we propose, as the most flattering evidence of its esteem for his labors, to place him on the list of candidates for the title of CORRESPONDING MEMBER."

ADOLPHE BROGNIART,
Membre de l'Académie des Sciences.

M. GRIS has since addressed the following note to the *Royal Horticultural Society of Paris*, which we find in their *Annales*:

"Allow me to beg my colleagues, and horticulturists generally, who wish to repeat my experiments, to operate with the

precautions and in the doses given in my notices previously published. The Society will understand that I cannot be responsible for any success or failure growing out of applications too weak, or too strong, when the temperature is too low, upon glaucous foliage that sheds washes ordinarily applied, etc.; this would be the subject of interminable discussions.

"In all experiments, carefully made, like those in the royal garden, I distinctly state that ninety-five cases in every hundred have been successful. This year not a single leaf has been blackened or discolored by the application of the salts of iron, in the long series of experiments to which I have devoted myself in this establishment.

"In the mean time the following are about the proportions to which it is necessary to adhere. 3 to 4 drams of sulphate of iron (*green copperas*) to a quart of water, for all applications to be made by watering the roots.

"One-fourth of a dram, only, (2 *grammes*, *seulement*), to a quart of water, for showering or bathing the surface of the leaves. (The copperas should be dissolved just before applying the solution.)

"With one ounce of common copperas, (sulphate of iron,) we may therefore prepare 16 quarts of the solution, fit for all usual applications to the leaves of plants.

I have the honor to be, &c.,
EUSEBE GRIS."

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REMARKS BY THE EDITOR.—We are inclined to look upon the discovery of M. GRIS as detailed in the foregoing report as one of the most important made in horticultural science for many years past.

Every experienced cultivator well knows how little science has hitherto offered as remedies for any constitutional or organic diseases of plants. To prune, to improve the soil by manures, to renew it by deeper tillage, to exterminate injurious insects—this is nearly the extent of the remedial agents in common use.

In the mean time there are various maladies, like the *yellows* in the peach tree, and

the pale and sickly hue of many fruit trees and green house plants, indicating a feebleness of vital energy, which the ordinary means referred to often entirely fail to cure.

Now those who have paid the least attention to vegetable physiology are aware how *absolutely impossible it is for a tree or plant to remain healthy without the healthy action of its lungs or leaves*. Hence the obvious importance of this discovery of a specific, which directly affects the diseased organs, and gives us the power of restoring their original state of health.

Such a specific, it would appear, has been ascertained to exist in the salts of iron, and especially in the sulphate of iron, commonly known as *copperas*. M. GRIS' experiments with this substance, as detailed in a work he has published on this subject, are very various and interesting, and we cannot but think them well worthy of repeated trial and verification in this country.

The *yellows*, that malady of the peach tree, so troublesome in some parts of the Union, we consider a constitutional disease, originating in bad culture or indifferent soil.

As it manifests itself chiefly in a kind of chlorosis, or pale discoloration of the leaves, the trees attacked by it seem to us to be indicated as fit subjects upon which to try M. GRIS' experiments. It is scarcely probable that trees thoroughly diseased with the yellows, will be restored, but the disease may be arrested and finally exterminated by timely applications to young trees.

A medical friend, one of the most distinguished practitioners in this country, to whom we have submitted this article by M. BROGNIART, remarks that *iron* has been the successful remedy for *chlorosis* in the human race, time out of mind, thus giving another proof of the analogy between the animal and vegetable kingdoms.

As many of our readers will no doubt soon put M. GRIS' recipes in immediate use, we beg them to keep accurate memoranda of their mode of applying copperas water, and the success attending it.

For some remarks on the application of the oxides of iron to the *pear* tree, see an article on the effects of *Iron on the Pear*, which we shall publish in our next No.—
ED.

SALT AS APPLIED TO THE PLUM TREE.

BY L. WYMAN, JR., WEST CAMBRIDGE, MASS.

I HAVE received, recently, several communications and letters of inquiry, &c., relating to the application of *salt* to the plum tree, as a preventive to the disease, by many known, or called the "*Black Wart*," or "*Black Knot*." As a knowledge of all that relates to the culture of this delicious fruit, deserves a prominent place in the horticultural works, I must ask permission to give, through the columns of your widely extended journal, a few of the practical results of

the application of *salt* in the culture of the plum tree, as tested by myself, in situations favorable to its experimental application.

Some eight years since, I was requested to examine a small orchard of plum trees, of the different choice kinds, which was located near the grounds of a former or old plum orchard. The stumps of some of the old trees were still remaining to be seen. After carefully examining the young trees, which were from three to five years old, I

found upon several, some six or eight large *knots* or *warts*, on each tree, and quite a number of smaller ones just beginning to burst the bark, or develop themselves, especially upon the young trees. I carefully examined the soil, which I found to be new or fresh, (not a worn out soil,) and of good loamy quality. I also ascertained that the trees which grew in the old orchard were all of them more or less affected with the *knot* or *wart*, some of which extended, in unsightly excrescences, over a surface of from eight inches in length to a foot, upon the limbs or twigs, and the result was, as might have been anticipated, (and was also the case with the young orchard,) an entire non-production of fruit, or none except of small, inferior quality. I recommended breaking up the soil around the roots of the young trees, to a good depth and considerable extent, late in the fall of the year; and, in the spring following, the application of two pails full, by measure, of the liquid drainage of the cesspool, or "sinkspout," added to one-half bushel of good new loam, to which composition I added three pints of common salt, intimately mixing the whole together. This was then spread around the roots of each tree, care being taken not to let any of this composition lay upon the bare roots or bark of the tree, but spreading it equally around the tree in a circle of about two feet diameter. I also recommended the removal of all the *knots* or *warts* from the tree, with a sharp knife, paring the ex-

crescences smoothly down to the natural dimensions of the limb. This pruning operation is to be performed in the spring, as early after the first flow of the sap as practicable. The application of the salt, &c. may be made either in the spring (in March) or the fall, as convenient; but the best time is in March, or at farthest not later than the middle of April.

The result of the first application, as an experiment, was about a middling crop of plums the ensuing season, and *no* appearance of the *knot* or *wart*, or premature dropping of the fruit.* The same mode of culture was again applied the season ensuing, with a much better result, the trees not only growing very rapidly (thus proving the fertilizing qualities of the salt, &c.) but yielding a good crop of fruit, of an increased size, and fine flavor.

The above method of culture I have applied to my own plum trees, and to other *Plum Nurseries* of which I have had the care, and with the most satisfactory result. I am favorably impressed with this method of plum culture, and the salt alone may be used in small quantities, in the winter season, at several applications, without the liquid drainage of the sink, if the trees stand in good soil, with very good results. And the fortunate possessor of a garden of choice plum trees, by following the above suggestions, need not fear the "BLACK KNOT OR WART."

L. WYMAN, JR.

West Cambridge, Mass., March, 1847.

SOME SELECT LISTS OF ORNAMENTAL SHRUBS.

As the planting season approaches, we are warned by various hints and inquiries from our correspondents, that "some information relating to a choice of a few of the most popular hardy shrubs, of easy culture, would

be acceptable to numerous readers"—many who are just beginning the improvement of

* The *knots* or *warts*, if smoothly cut off after the spring sap has commenced flowing, will readily heal, and by the next season present a healthy appearance.

their grounds—laying out gardens for the first time, or extending their pleasure grounds. There are, in commercial gardens, some hundred species of shrubs, most of which possess points of interest, in foliage, flower or fruit, and nearly all deserve a place in a large shrubbery. Only a few of them, however, are needed for small gardens, and among such, requiring only good common soil, and no protection in winter, in this latitude, we give the following list, as comprising the most desirable 25 hardy deciduous shrubs:

Pink Mezereum, *Daphne mezereum*; Japan Quince, two sorts, white and scarlet, *Cydonia japonica*; Double Almond, *Amygdalus pumila* pl.; Double Purple Tree Pæony, *Pæonia moutan Banksii*; White Persian Lilac, *Syringa persica alba*; Chinese White Magnolia, *Magnolia conspicua*; Soulange's Magnolia, *M. soulangiana*; Sweet-scented Magnolia, *M. glauca*; White Fringe Tree, *Chionanthus Virginica*; Garland Deutzia, *Deutzia scabra*; Carolina Syringo, *Philadelphus grandiflorus*; Broad-leaved Laburnum, *Lytissus laburnum latifolia*; Rose Acacia, *Robinia hispida*; White Tartarian Tree Honeysuckle, *Lonicera tartarica*; Red Tartarian Tree Honeysuckle; Double White Hawthorn, *Crategus oxyantha, alba* pl.; Double Pink Hawthorn; Sweet-scented Shrub, *Calycanthus florida*; Dwarf White Horse Chestnut, *Pavia macrostachya*; Fragrant Clethra, *Clethra alnifolia*; Oak-leaved Hydrangea, *Hydrangea quercifolia*; Venetian Sumac, *Rhus cotinus*; Purple Burning-bush, *Euonymus atropurpureus*; Buffalo Berry, male and female, *Shepherdia argentea*.

The foregoing will furnish a succession of flowers or ornamental fruit from March to November.

A selection of hardy deciduous shrubs of rapid and bulky growth, suited for masses or

screens, for immediate effect, is the following: Common Privet, *Ligustrum vulgare*; Carolina Syringo, *Philadelphus grandiflorus*; English Fly Honeysuckle, *Lonicera xylosteum*; Cornelian Cherry, *Cornus mascula*; Common White Lilac, *Syringa vulgaris, alb.*; English Filberts, *Corylus avellana*; Common Buckthorn, *Rhamnus cathartica*; Sea Buckthorn, *Hippophae rhamnoides*.

A few of the finest hardy vines, or climbing shrubs, are the following: Large Flowering Trumpet Creeper, *Bignonia grandiflora*; Queen of the Prairies Rose, *Rosa ratiifolia*; Chinese Wistaria, *Wistaria sinensis*; Sweet-scented Clematis, *Clematis flammula*; Double Purple Clematis, *C. verticella, pl.*; Monthly Fragrant Honeysuckle, *Lonicera belgica*; Chinese Twining Honeysuckle, *L. flexuosa*; Yellow Monthly Trumpet Honeysuckle, *Lonicera fraserii*.

The following is a list of hardy shrubs, remarkable for the fragrance of their flowers: Mezereum, *Daphne mezereum*; Fragrant Clethra, *Clethra alnifolia*; Missouri Currant, *Ribes aureum*; Sweet-scented Magnolia, *Magnolia glauca*; Chinese White do., *M. conspicua*; Chinese Purple do., *M. purpurea*; Soulange's do., *M. soulangiana*; Common Syringo, *Philadelphus coronarius*; Sweet-scented Shrub, *Calycanthus florida*.
Fragrant vines or climbing shrubs: Persian and other Lilacs; Sweet-scented Clematis, *C. flammula*; Chinese Wistaria, *Wistaria sinensis*; Chinese Twining Honeysuckle, *Lonicera flexuosa*; Monthly Fragrant do., *L. Belgica*; White Jasmine, *Jasminum officinale*.

A list of hardy shrubs that will grow in wet places: Willow-leaved Sporia, *Sporia salicifolia*; Tomentosa do., *S. tomentosa*; Swamp Globe Flower, *Aphelandthus occidentalis*; Leatherwood, *Dirca palustris*; Sweet Willow, *Salix lucida*, and all other willows;

Clethra, *C. alnifolia*; Spicewood, *Laurus benzoin*; Winterberry, *Prinos verticillatus*.

A list of hardy shrubs that will grow in dry, poor soil: Privet, *Ligustrum vulgare*;

Buckthorn, *Rhamnus catharticus*; Buffalo-berry, *Shepherdia argentea*; Bloody Dogwood, *Cornus sanguinea*; Snowberry, *Symphoria racemosa*; Jersey Tea, *Ceanothus americanus*, &c.

FOREIGN NOTICES.

A "MOUTH-WATER" FOR POMOLOGISTS.—We find in a late number of the *Revue horticole*, the following account of a splendid new cherry brought to light in the interior of France. If it sustains the character given, it will rank at the head of all cherries for size and beauty, and probably will equal any of the large varieties in flavor. Our outline is an exact copy of the plate accompanying the description. The color of the fruit (*beau rouge vermillon*) is as striking as its size.

As the first few trees of this superb new fruit were only offered for sale in France last autumn, we presume it will not find its way to this country till the autumn of the present year. In the mean time, the most ardent of our pomological friends must be satisfied with the description which follows.—ED.

GREAT BIGARREAU OF MEZEL. *Bigarreaux Monstreaux de Mezel*.—This magnificent variety has been discovered at Mezel, a village of Limagne, a short distance from Clermont-Ferrand.*

The history and description of this new fruit were given, on the 5th of July, to the *Horticultural Society of Auvergne*, in the report of M. H. LECOQ, vice-president of the society. We extract here the part relating to this tree.

* Puy de Dôme, central France.—ED.



Fig. 107. *Great Bigarreau Cherry*.

Our honorable colleague, M. LIGIER DE LA PRADE, had frequently spoken to us of a new cherry which he had observed on his estate at Mezel. This year, wishing to be assured respecting the qualities and origin of this fruit, M. Ligier requested the Society to delegate a committee for its examination, and Messrs. CARLIER, BRAVY, and MARTIAL DE CHAMPELLOUR were appointed to proceed to the spot to prove the merits of this novelty. A message from M. Ligier announced its maturity on the 18th of June, and the committee hastened to reply to his appeal. A lady of the Horticultural Society was desirous to join us, in order to taste and appreciate the new fruit, of which she gives a faithful portrait, finely and richly colored. At ten o'clock in the morning, some of us were beneath the cherry-tree, and others fairly among its branches. It stands in a vineyard a short distance from the elegant chateau now being built by M. Ligier.

The fruit was abundant, and, as is often the case with the Bigarreus, their season of ripening was unequal, so that the tree bore, at once, cherries of a deep brownish purple, others red on one side only, and others again of a scarcely perceptible flesh-tint. The tree was tall, at least thirty years old, and grafted low on the stock.

"The cherries were most abundant; and some of the upper branches were bending under their weight in the most graceful manner.

"The weight of this fruit is remarkable. Some of the cherries weighed ten grammes ($6\frac{1}{2}$ dwts.) each, and, on an average, eleven of them, weighed accurately, completed a *hectogramme* (nearly a fifth of a lb.,) which gives one hundred and eighteen cherries for a *kilogramme* (2 lbs. $3\frac{1}{2}$ oz. av.,)—an enormous weight when compared with that of other known cherries.

One of the cherries measured 0^m.083 (nearly four inches) of circumference in breadth, and 0^m.090 of circumference in height.* When we add, that the season was not a favorable one, and that the fruit was affected by a species of blight which has appeared several times at Limagne during their ripening, and therefore they had not acquired the size that a favorable year would have given them, the extreme beauty of the fruit, which we were requested to examine and test may be appreciated.

"The form is oval, slightly flattened on the sides, a little obtuse at the base, slightly irregular on the surface, concave at the point where the stalk is inserted, which is slender and of middling length.

"The skin is a fine vermillion red, mingled with carmine, glossy and brilliantly polished on the surface. The flesh is rose-colored, firm though melting, sweet (*seurcé*), and very good. The pit is small.

"The tree is very vigorous. We measured leaves, taken, indeed, from a young graft, of which the length was 0^m.19 ($7\frac{3}{4}$ inches,) and the width 0^m.11, giant foliage, which gives the tree a foreign aspect.

"Some other trees of the same kind are growing at Mezel; they are all of the same age, and all

grafted. Nevertheless, the cherry of M. Ligier appears to us entirely new, and we do not hesitate to pronounce it the most beautiful and best Bigarreus that we have yet seen. We believe it to be unknown except at Mezel, where, without doubt, it has originated accidentally. These grafts having been gathered by persons struck with the beauty of the fruit, it has thus been rescued from destruction and oblivion.

"Trees of this variety will be for sale this autumn (1846,) at the horticultural establishment of Messrs. Bravy & Co., at Clermont-Ferrand. LECOQ."

.....

SUPERPHOSPHATE OF LIME.—When a small portion of superphosphate of lime is mixed with seeds when sown, in sufficient quantity to give them the appearance of being limed over, the seeds germinate quicker and stronger, more especially in the case of old seeds; and it is also found that the plants are less liable to damp off, or be injured by insects.—*Geo. Gordon in Jour. Hort. Soc.*

.....

DWARF DAHLIAS FOR BEDDING.—The Dahlia is well adapted for growing dwarf, in the manner of Verbenas, and in this way makes flower beds of the most gorgeous appearance. The management required is by no means difficult, though it needs considerable attention to produce a fine effect. Those sorts only should be chosen which are naturally of a dwarf habit, and as there is an abundance of this class now in cultivation, the selection is not difficult. In planting them, they should be placed as nearly flat as possible; as fast as the shoots grow, they should be fastened down, not in the usual way with pegs only, but with small pieces of bass matting tied to a long wooden peg; the bass should be tied loosely around the shoot, allowing free room for future growth, and the peg may be gradually driven deeper into the soil as the downward growth renders it safe—without this care the shoots are apt to be broken. This applies principally to the leading shoots; the laterals being left to grow to flower upward, they will generally require thinning, as this mode of growing them increases their natural luxuriance greatly. The following sorts are well adapted to this sort of culture:—*Marchioness of Ormonde* (Browne's) clear white, tipped with violet-purple; *Dazzle* (Keyne's), rich dark scarlet; *Duchess of St. Albans* (Whales,) delicate primrose, tipped with mulberry; *Bermundsey Bee* (Proctor's,) deep purple; *Orange superb* (Dod's,) dark orange; *Lady Grey* (Harrison's,) light lilac. There are many others equally good, but these I have tried with complete success.—*J., London Hort. Mag.*

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LATE RASPBERRIES.—Mr. John Mearns thus describes his mode of obtaining a strong autumnal crop of late Raspberries:—"In May remove the young fruit-bearing shoots from the stalks or canes, leaving, in some cases, one or two eyes; in others cutting them clear off. Under either plan, they show an abundance of vigorous shoots, frequently three or four from each eye, which produce plenty of blossoms in the beginning of July; and on these a good crop of fine raspberries is borne in August,

* The dimensions of the fruit represented in the plate are not so great as those stated in the report.

when all the regular produce on the plants not thus treated, is consumed.

.....
SPLENDID NEW AQUATIC PLANT.—Curtis' Botanical Magazine for the present month is wholly occupied by a history of *Victoria regia*, the most noble of all aquatics, and of which living plants exist in the Royal Botanical Garden, at Kew. We need not say that Sir William Hooker has done justice to his subject. In addition to a sketch of the royal plant reposing on the surface of the quiet waters in which it loves to dwell, we are presented with many details of its structure, never before published. The living plants to which we have alluded, were raised from Bolivian seeds brought home by Mr. Bridges, one of the most indefatigable and successful investigators of the Natural History of South America. We must refer to this interesting monograph for full information respecting the plant, our limited space not permitting us to extract more than the following memorandum, supplied by Mr. Bridges:

"During my stay at the Indian town of Santa Anna, in the province of Moxos, Republic of Bolivia, during the months of June and July, 1845, I made daily shooting excursions in the vicinity. In one of these, I had the good fortune (whilst riding along the woody banks of the river Yacuma, one of the tributary streams of the Mamoré) to come suddenly on a beautiful pond, or rather small lake, embosomed in the forest, where, to my delight and astonishment, I discovered, for the first time, 'the Queen of Aquatics,' the *Victoria regia*! There were at least fifty flowers in view, and Belzoni could not have felt more rapture at his Egyptian discoveries than I did in beholding the beautiful and novel sight before me, such as it has fallen to the lot of few Englishmen to witness. Fain would I have plunged into the lake to procure specimens of the magnificent flowers and leaves; but knowing that these waters abounded in alligators, I was deterred from doing so by the advice of my guide, and my own experience of similar places.

"The *Victoria* grows in 4 to 6 feet of water, producing leaves and flowers, which rapidly decay, and give place to others. From each plant there are seldom more than four or five leaves on the surface, but even these, in parts of the lake where the plants were numerous, almost covered the surface of the water, one leaf touching the other. I observed a beautiful aquatic bird, (*Parra* sp.?) walk with much ease from leaf to leaf, and many of the *Muscicapidae* find food and a resting-place on them. The plant occupies almost exclusively the water, with the exception of a few floating aquatics of small dimensions, amongst which I saw a beautiful *Utricularia*.

"The blossoms rise six and eight inches above the surface, expanding first in the evening, when they are pure white; changing finally (and by exposure to the sun) to a most beautiful pink or rose color; flowers may be seen, at the same time, partaking of every tinge between the two hues, the recently expanded being pure white and the adult rosy, almost sinking under the water to ripen its seed and produce a new race of plants when required.

The largest flowers I saw, measured from ten inches to one foot in diameter.

"I had an opportunity of experiencing the fragrance of the flowers. Those I collected for preserving in spirits were unexpanded, but on the point of opening; on arriving at the Government House, in the town, I deposited them in my room, and returning after dark, I found to my surprise that all had blown and were exhaling a most delightful odor, which at first I compared to a rich Pine-apple, afterwards to a Melon, and then to the *Cherimoya*; but indeed it resembled none of these fruits, and I at length came to the decision that it was a most delicious scent, unlike every other, and peculiar to the noble flower that produced it.

.....
JOSLING'S ST. ALBANS GRAPE.—It is but seldom that a seedling Grape is obtained which can be recommended in preference to those varieties that have been long in cultivation; and still more rarely do seedlings possess any of that peculiarly rich flavor which characterises the Muscats of Alexandria and Frontignans. A Grape having the high qualities of those just mentioned, and not liable to shank and shrivel as every gardener is aware the Frontignans are too apt to do, must be a great acquisition; and such the seedling which forms the subject of this notice will undoubtedly prove. It was raised by Mr. Robert Josling, Seedsman, &c. St. Albans, from seed sown about six years ago; and a notice of its fruit appeared in the *Gardener's Chronicle*, 1845, page 660, as being excellent, rich and sugary, with a Frontignan flavor; and that the variety was deserving of extensive circulation. This year fruit of it was exhibited at the meeting of the Society in Regent-street, September 1st, for which a certificate of merit was awarded. The bunch, supported by a strong footstalk, is very long and tapering, with strong diverging shoulders. The berries are about the size of those of the White Frontignan, round, greenish-white, acquiring a tinge of golden-yellow when well ripened. Flesh rather firmer than that of the Frontignan grapes, but not so firm as that of the Muscat of Alexandria, very rich and sugary, with a Frontignan flavor. The leaves, in their general outline, are tolerably round, their lobes not deep, but the serratures are tolerably sharp; both the upper and under surfaces are remarkably glabrous, and slightly tinged with red. On the whole, the leaves bear considerable resemblance to those of the White Muscat of Alexandria; the berries, however, differ in being decidedly round, like those of the Frontignans; but the leaves of the latter are not glabrous, being furnished with bristly hairs at and near the axils of the veins beneath. It is perfectly distinct from any other variety known. The following has been received from Mr. Josling in reply to inquiries respecting this excellent Grape:—"About six years ago I sowed some seeds of Grapes disfigured by wasps, of the White Muscat, White Hamburgh, or Large White Nice, White Muscadine, and White Sweet-water; the Frontignan I did not grow at the time. These were gathered and sown promiscuously, so that I can not say positively from which of these sorts the variety in question has originated. My opinion is,

that it is between the White Nice and the Muscat ; these grew side by side. In the following autumn, after the seedlings came up, two were planted by the side of each vine already growing ; and the shoots trained up the rafters inside. Most of these have fruited, but proving worthless have since been cut away. I reserved three, besides the one which is the subject of this communication, but they are much inferior to it. For this I made space by cutting away the original vine, a Black Hamburgh, by the side of which it was planted. It differs most distinctly from the White Frontignan, from the time of showing fruit, until, and when, ripe. In showing its fruit the branches are very long, on amazingly stout footstalks, which strut diagonally from the vine in a manner very different from any I grow. At this stage they are very conspicuous throughout the house. After this the berries assume a dark-green color ; the Frontignan is of a pale green ; it shoulders, the Frontignan does not ; the bunch tapers to a point, the Frontignan is more cylindrical ; the footstalk throughout the bunch is very stiff, the Frontignan hangs loosely. In flavor it approaches the Frontignan more than any other grape ; but even in this respect, it differs materially, the berry in the mouth having more substance, and being more sugary and sweetmeat like ; when ripe it assumes a dark-gold color. The berries have their pedicels well extended, so that much thinning is not required. With regard to the foliage, on first breaking, it has not that white mealy appearance which the Frontignans have ; it more resembles the Black Hamburgh in all its habits of growth. In ripening, this variety is rather later than the Frontignan, and has not shrank with me, nor shrivelled in the berry, as does the Frontignan. I have grown 30 rafters of Grapes in three houses, of the leading kinds, within the last sixteen years, and I can assert that it is decidedly distinct from any that I grow. Its habit of growth is strong and robust ; and altogether I consider it a valuable variety." In this opinion I concur.—Thompson, in *Journal of the Hort. Soc.*

PRIZE FOR A BLUE DAHLIA—The Horticultural Society of Edinburgh has offered a prize of £1000 for that supposed impossibility, a blue flowered Dahlia : and the Horticultural Society of Dublin, has since offered double that sum, £2000.

We have always been numbered among the most zealous promoters of the progress of horticulture. But we stop here, to express the feeling which the perusal of this programme awakens. To propose a prize of fifty thousand francs for a Dahlia, in Ireland ; in that unhappy country where famine has become a national disease, an endemic malady—it is an insult to public misery !—*Revue Hort.*

IMPROVEMENT OF THE PERSIMMON.—We observe in the *Bon Jardinier*, that two intelligent French horticulturists, Messrs. REGNIER and AUDIBERT, have been raising seedlings of our native Persimmon, (*Diospyrus virginiana*), in the hope of producing finally an excellent edible fruit.

Their efforts have already been attended with the most promising results. M. AUDIBERT has produced a seedling with large round fruit, double

the size of the original species, the flavor of which, " recalls that of a mirabelle plum."

M. BEYNIER'S best seedling, he has named *Plaqueminier Pierquin*, Pierquin's Persimmon, in honor of one of his friends. The fruit is as large as a hen's egg, oval acuminate, of a golden yellow color, and an agreeable flavor.

These gentlemen intend continuing their experiments with successive generations of Persimmons, raised from these new varieties, and there is every reason to believe that they will be rewarded at last by a variety which will prove an admirable addition to the dessert.

HARES AND RABBITS.—We have been much troubled with them for years, and have tried tar, oil, soot, lime, string tarred and oiled, but all to no purpose. In the summer of 1843, we had a fine plantation of Sturmer Pippins spoiled in one night, as well as other young apple trees. So very destructive are these creatures, that we determined upon having every plant of crab and apple removed into another garden ; but one of our men observing that he had seen *brimstone* tried, and that it had the desired effect, we immediately set to work and made a quantity of large matches, like those used for suffocating bees, and stuck them about the ground, (the matches were not lighted ;) and since using them thus, not a leaf has been touched. As to Rabbits not eating *Rhododendron*, we have proof to the contrary ; for on a piece of land where we have not used matches, the *Rhododendrons* are bitten off as clean, as if the pruning shears had been at work on them. In very severe weather, Rabbits have been known to attack, and bark the stems of standard Roses. We melted the sulphur in an iron pot, and when hot dipped the matches, which were made by winding tow, rags, or anything we could lay hold of, round sticks and firmly binding it on.—S. & J. D. *Sturmere Gard. Chron.*

WOOD FOR COFFINS.—This a grave subject, and has enlisted the attention of an English paper, which says married people should be buried in pear tree coffins, chronologists in date tree, bricklayers and plasterers in lime tree, pugilists in box wood, schoolmasters in birch, old bachelors in elder tree, cowards in trembling aspen, the honest far in sturdy oak. The list may be extended by adding : Misers in chest-nut, inconsolate maidens in pine, democrats in hickory, whigs in ash, politicians in slippery elm, authors in pop(u)lar, millionaires in plum, old soakers in cherry, pretty women in sugar maple, handsome folks in dogwood, clam-catchers in beech, soldiers in lancewood and hard-hack, dairy-maids in butter-nut, dandies in spruce, fishermen in bass-wood, poets in laurel, horse-jockies in horse-chestnut, hatters in fir, shoemakers in their own tree, blacksmiths in iron-wood, book-binders in boards, lovers in the tulip tree and sigh-press, coquettes in witch-hazel, travelers in sandal-wood, gardeners in rose-wood, landscape painters in birds-eye maple, carpenters in plane-tree, misanthropes in crab-apple, odd-fellows in the palm tree.

The following may also be considered very ap-

appropriate plants for decorating the graves of different craftsmen, professional men, &c. Watch makers the "four o'clock" and thyme, sextons of churches canterbury-bell, surgeons boneset,

astronomers night-shade, upholsterers fringe-tree, dry-goodsman calico plant, fortune hunters marygold, spendthrifts, the billberry, scribblers the calamus or jonquille, cooks the pansy or buttercup.

DOMESTIC NOTICES.

PLANTING IN CEMETERIES.—A friend in New-York, desires some hints on "the best mode of enclosing cemetery lots." We have already expressed our strong disapprobation of most of the iron railings now so much in fashion for this purpose—both as being tasteless in themselves, and associated with the *areas* and *front door steps* of cities, and as destroying the feeling of repose and rural beauty which should pervade a cemetery.

Where these railings already exist and cannot well be removed, we would obviate the objection to them by wreathing them about with some hardy and beautiful vines, or twining shrubs. The most desirable for this purpose, that occur to us at the moment are the following: Chinese twining honeysuckle, (*Lonicera flexuosas*.) with fine, dark, sub-evergreen foliage and fragrant flowers; Chinese Wistaria, (*W. sinensis*.) a luxuriant vine, with long clusters of pale lilac blossoms; and the Periploca or Virginian silk, (*Periploca græca*.) with rich green leaves and curious brownish flowers. One plant of these would soon make a rich drapery over a piece of iron railing 8 or 10 feet long. A plant or two of the Sweet-scented clematis (*Clematis flammula*) might be mingled with the foregoing in planting. Its small foliage would be of no value in covering the iron work, but its delicate showers of pale star-like blossoms would have a most pleasing effect in summer, when in bloom, to say nothing of its delicious perfume.

For an *evergreen hedge*, as an enclosure to a cemetery lot, and we consider it the most appropriate—we think there is nothing on the whole like the *Arbor Vitæ*. This plant, as it grows on the Hudson, is almost a fac-simile, in its tapering conical outline and general effect, of the *Evergreen Cypress* of the South of Europe—so long a favorite in cemeteries abroad. Its color is a rather more cheerful hue of green, and therefore more agreeable in our eyes. Planted and treated as a hedge, it may, by shearing it annually, (and no plant bears shearing better,) be kept down to the height of three feet. Or if it is left to grow untrimmed it will at last form a thick screen or enclosure, say 15 feet high. The latter we must confess suits our feeling of the seclusion and privacy which should shield the last place of repose of a private individual, far better than the open garish display of iron fence and sculptured stone which catches the eye of the multitude.

A very neat and pretty hedge for a cemetery lot, growing about three or four feet high, and requiring very little care, may be formed by planting the well known Double White Scotch Rose (*Double Burnet*, of some.) Its foliage and thick, compact habit of growth, render it pretty through the

whole season, and in May it is thickly studded with its delicate little white roses. *Privet* very speedily makes a thick hedge of foliage, and is very well adapted for this purpose, and that pleasing evergreen shrub, lately introduced into our gardens, and which we notice is already quite common in the Philadelphia nurseries—the *Japan Euonymus*, (*variegated leaved*) will make an excellent low hedge or border for enclosures of this kind.

PRUNING THE PEACH TREE.—This is the season in the Northern States, for "*shortening-in*" the young wood of bearing peach trees, as recommended in our work on *Fruits*, page 259.

We are glad to perceive that the merits of this mode of pruning the peach, are beginning to be very generally appreciated among our cultivators. We consider it the most important point in peach culture, and cannot too often, or too strongly, impress its value upon our readers.

Last summer, we were shown, by a market gardener, a row of fine, thrifty standard peach trees, 5 years planted. There were eight trees in the row. Two of them had been regularly *shortened-in*, in the month of April, over the whole surface of the last year's growth, cutting back just half the young wood. The other six were allowed to remain without any pruning.

The two trees that had been shortened-in, bore a good crop of very large and handsome fruit, which readily sold for two and a half dollars per bushel in New-York market. The *shortening-in* had of course taken away half the blossom buds at once, and given the whole vigor of the tree to the remainder.

The other six trees were overloaded with fruit to such a degree that many of the branches were broken with its weight, which caused the gum to ooze out, and will probably lead to the premature decay of the trees. The fruit being so very abundant was of course under medium size, and neither high flavored, nor handsome in appearance. It was sold for one dollar per bushel. Need we add anything more to those who desire to raise the finest or the most saleable fruit.

NOTES FROM PHILADELPHIA.—The general business of horticulture may be said never to have been more prosperous here than it now is. There has been a demand this winter for more bouquets than could be supplied; a more enduring evidence, however, may be found in the fact that our *great staple* of green-houses, the Camellia, retains its place and price, notwithstanding the immense number that are annually propagated. In the language of the

money-market. Camellias "are in request, and prices have rather an upward tendency." One of our principal cultivators potted *four thousand plants* last season, and this spring will perform the same operation to *six thousand* more. A new market is just opening in the great West, where taste is surely making its way. A good Camellia plantation is a good investment.

This beautiful flower has probably not yet been seen in its greatest perfection among us. If some enterprising man of taste would erect a *Conservatory*, in such a manner that it could be removed in summer, and plant Camellias in the ground, where their roots would have a fair chance to extend themselves thoroughly in good deep soil, we might soon see Camellias twenty and thirty feet high, with flowers probably greatly enlarged. Will not some of our amateurs try it? As a speculation, it would answer well; very little heat would be required, and the plants would grow rapidly.

Among the very extraordinary and beautiful plants of this neighborhood, little known elsewhere, is the *Nelumbium luteum*, an aquatic plant, that has taken root and flourishes admirably in *Hollanders' Creek*, a mile or two below Philadelphia. Both leaves and flowers are superb. The Messrs. LAN- DRETH formerly succeeded in growing it very successfully in a pond in their garden. The roots were obtained in July, and tied up in earth with some straw, the stalk and leaves being then in perfection. The bundle was thrown into the rain-water pond, and here it flourished perfectly, some of the leaves measuring two feet across. It appears to me this elegant foreigner might be successful in every gentleman's park with proper care; and sure I am no such elegant aquatic has yet been introduced. It is supposed to have originated from some seed dropped from a ship that wintered in the creek a "long time ago." J. J. S. *Philadelphia, Murch, 1847.*

REMARKS.—This superb Lotus, or Water Lilly, referred to by our correspondent, is a native of this country, and a not unusual inhabitant of the lakes in the Southern, though very rare in the Northern or Eastern States. Its immense flowers and leaves, more than treble the size of those of the common water lilies, render it a very striking object. It grows wild in Big Sodus Bay, Lake Ontario. NUTTALL, in the *Transactions of the American Philosophical Society*, says its large "tubers resemble those of the sweet potato, and when boiled are, as farinaceous and agreeable as the potatoe, and are employed for food by the Osage and other Western Indians."—ED.

NOTES ON FINE PEARS.—The pear being a fruit remarkably liable to vary in quality from external causes, notices of those best adapted to various localities can hardly fail to be useful. The remarks of CHEEVER NEWHALL, in the last No. of the Horticulturist, are of this character. Perhaps a notice of some celebrated varieties, as produced in western New-York, may not be unacceptable.

The *Bloodgood* proves to be a decidedly first-rate pear; no one preceding, or ripening with it, proving its equal in all respects.

Dearborn's Seedling is one of the best—nearly equal to the *Bloodgood*, but smaller in size.

The *Skinless* is one of the freest growers of all pears, is abundantly productive, and always bears fair and uniformly good fruit, though not decidedly rich and high-flavored. It ripens before the *Bloodgood*, and, all points considered, is one of the most desirable early pears, especially on clayey soils.

The *Andrews* is a fine pear—a great bearer while the tree is yet young—and the fruit fair and handsome. But it proves only second-rate in richness, and drops early from the tree, often before the fruit is fully grown, and usually before it is sufficiently matured to ripen perfectly within doors.

The *Urbaniste* is an excellent pear, but too acid [? Ed.] for many palates, and is a very moderate bearer.

The same objection occurs here to the *Passe Colmar* and *Easter Beurre* as at Dorchester, the fruit very rarely attaining perfection under ordinary management.

The *Columbia* bears very fine crops of large fair fruit, but drops too early from the tree.

The *Flemish Beauty* is a large, fair, and productive variety, and, though not of first-rate flavor, proves worthy of cultivation.

The *Jargonelle* is a fine early pear, rather coarse, but quite rich in flavor, and needs, indispensably, house-ripening, not only to perfect its flavor, but to prevent the inevitable rotting at the core when left too long on the tree. The utility of house-ripening cannot be too frequently and strongly urged for most varieties.

Bezi de la Motte, once in five or six years, proves delicious; at other times it is tasteless and of no value. [Almost uniformly good here.—ED.]

The *Madeleine*, *Seckel*, *Bartlett*, *Virgalieu*, *Gray Doyenné*, and *Winter Nelis*, maintain the high character given them elsewhere; and were I compelled to choose but one variety, as best, for its agreeable and delicious flavor, I should perhaps select the *Gray Doyenné*. J. J. THOMAS. *Macedon, 3mo. 8, 1847.*

THE MERITS OF FLOWERING PLANTS.—It is by no means an uninteresting or useless occupation, to inquire into the nature and causes of the pleasure or indifference universally felt by all persons, when witnessing different kinds of plants in a flowering state. By so doing, the mind is led at once to discard all those vague and ambiguous notions which are frequently induced by extrinsic circumstances or personal infirmities, and to establish definitive rules for our future guidance and regulation. What is termed *taste*, is, we know, exceedingly varied and capricious; but there are, even in this, certain essential principles, which may be easily reduced to some degree of order, and rendered generally available.

The very first thing which attracts the attention of the observer of a flowering plant, is its blossoms. If these are very numerous, conspicuous, and of brilliant color, all other characters are for the most part forgotten, and it is pronounced valuable. But, when the flowers have faded, it is frequently discovered that the plant is both meagre and unsightly, and so continues throughout the remainder of the year. Here, then, we have a case in which it is evident, that a judgment formed upon the merits of

a plant by its flowers alone is altogether unsatisfactory and improper. Instances of a contrary nature might be adduced to show, that where the flowers are small and inelegant, the whole appearance of the plant may still be ornamental, and so remain perpetually. Again, if the foliage be taken as a criterion in the absence of flowers, conclusions equally erroneous may be readily deduced.

To determine with any degree of accuracy the general character of a plant, every feature must be strictly scrutinized. A really beautiful object of any description, is one in which *all* the parts are in some measure conformable to each other; and this is precisely the case with plants. Symmetry and harmony of outline, though essential, are quite insufficient to constitute beauty, unless every component part contribute distinctly and individually to create that harmony. A large, coarse, and uncomely flower, surmounting a slender and leafless stem, is certainly far from being a graceful object. In the same manner, an insignificant blossom, buried beneath a dense mass of noble foliage, excites feelings completely the opposite of admiration. Utility is not a constituent of beauty in plants;—therefore, in viewing them, it must be wholly excluded, as a quality, from our considerations.

Next to the general conformity of the different members of a plant, and the adaptation in the size and contour of their particular organs, their surface and color may be examined. These apply principally to the foliage and flowers. Leaves are technically termed *coarse*, when they are large, with great and numerous inequalities on their surface, and covered with hairs, bristles, or aculei. None of these characteristics, however, are independent criteria; and size, especially, is frequently associated with real beauty, when no other detractive quality accompanies it. Untidily, the preceding defects constitute the coarseness mentioned above; while precisely the contrary properties are necessary to true elegance or handsomeness. In point of color, whether it be light, deep, or any intermediate shade, the tints should be lively and clear; and this is particularly desirable when the plants are what is termed evergreen.

As the appearance of flowers is considerably deteriorated by association with insignificant or slovenly foliage, so, in a much greater degree, fine foliage alone can never compensate for the want or inferiority of blossoms. Flowers are and must be regarded as the greatest ornaments of a plant, however fugitive they may be. It is important that they stand out boldly and advantageously to view, that their form be symmetrical (or as near it as possible in each case,) but chiefly that their colors be distinct, bright, and agreeable.

In a large proportion of instances, the observer of a plant is determined in his opinions by the color of its flowers. But this, when viewed apart from other considerations, is the result of an erroneous and puerile taste. Hence so many shabby-looking, and really uninteresting plants, acquire a degree of notoriety purely artificial, and which invariably subsides when the novelty of its object has ceased. By this means, also, persons of correct taste wholly disregard popular declarations; and many highly valuable plants are thus retained in

that state of obscurity which is alone merited by their injudicious and incompetent appraisers.

The preference for certain colors is a question to be decided by individual taste, although some are almost universally voted vulgar; but the characters herein depicted are essential to real beauty. If the persons who cultivate plants for sale, and those who in any way describe them, would bear these principles continually in mind, their opinion would be regarded with much greater deference and confidence, and the diffusion of floricultural taste and practice would be wonderfully facilitated. Nor could it be otherwise than useful to the general cultivator, particularly to those who are frequently called upon to decide the merits of plants at horticultural exhibitions; as they would thus acquire that stability and assurance of judgment which would insure a cheerful and ready acquiescence in their award.

We trust this article, though brief, will be found of some value to the reader. Though not original, its language is yet so entirely in accordance with our opinions, that we have not thought it expedient to do more than change the phraseology in a few particulars. It is enough to say, that the views expressed are those of Mr. Paxton, whose "Magazine of Botany," now numbering twelve volumes, may justly be regarded as one of the most elegant works of the kind it has ever been our good fortune to see, not merely for the splendor of its numerous plates, but, also, for the vast amount of information it contains on every subject appertaining to the literature of gardening. Believing that to nine-tenths of American readers its excellencies are entirely valueless, because unknown, we purpose using it freely in our communications, and have full confidence in our belief that a benefit will thus be conferred upon horticulture and its rapidly increasing patrons. WM. W. VALK, M.D. *Flushing, L. I.*

EARLY PEAS AND CHEAP HOT-BED LIGHTS.—I practice a cheap way of raising early peas, which may be worth making known to some of your readers.

This is nothing more or less than starting them under cover, about three weeks earlier than it is possible to do out of doors. I do this by taking any cheap rough boards, six or eight inches wide, and nailing end-pieces to them, so as to form a common trough, (fig. 108.) This trough I fill with good rich garden

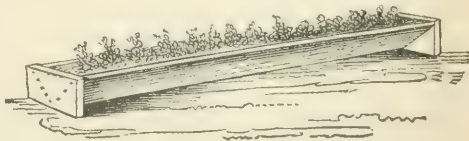


Fig. 108.

soil, and sow it with a row of peas. The troughs may be placed in a green-house in any convenient place, or in a temporary hot-bed frame. I make my troughs or boxes eight feet long for the sake of convenience, and I start them in frames made in a method equally cheap.

This cheapness consists in using stout cotton stuff

stretched on frames, *instead of glass*, for the lights. It makes lights quite as good as glass for most forcing purposes, and costs not a fifth as much. After the cotton is stretched on the frames, I make it transparent and durable by giving it a coat of the following composition: *three pints best old boiled linseed oil, four ounces white resin, and one ounce sugar of lead.* The oil and resin must be a little heated to make them mix, and the sugar of lead must be first ground with a little of the oil, and then mixed with the remainder. I usually brush a coat of this over my canvas lights every season before using them.

I place my troughs of peas in rough board frames, covered with these canvas lights, about from the middle of February to the middle of March, which is about three weeks before they will come up out of doors here. Some of those sown earliest, I give a little hot-bed start to, by placing about two feet of stable manure at the bottom before putting down the frames. On this I place my troughs, and this gives them a good start in the commencement. I do not take the trouble to renew any linings of litter.

But for my main crop of early peas, which I start about the 1st of March, I use nothing but the frame and the canvas lights, which cover it. This gives warmth and shelter enough for peas; for my crop in the troughs is growing every day with little or no attention, while in the open ground they have scarcely vegetated.

As soon as the weather becomes mild and fine—say, by the 1st of April—I prepare a spot in the kitchen garden, in which to *transplant* my early peas. This is very easily done by making a slight trench, just large enough to take in the whole trough—fill the earth up to the sides of the box, knock away the ends, and then, carefully drawing out the sides, press the mellow soil up to the earth in the trough, as the sides are drawn away. By watering the earth in the troughs beforehand, and doing the work nicely, the peas “will never know they have been transplanted.” Now stick them and earth them up, and you will be able to gather an excellent crop of early peas at least two weeks before the most industrious of your neighbors who have trusted to the open air only, and three weeks earlier if the weather is mild, and you have started your troughs early with some manure in the hot-bed.

KITCHEN GARDENER.

THE BEST EARLY PEA.—Pray which is the best early pea, taking earliness, excellence of flavor, and productiveness into the account? I find many new names in the seed-shops, and am in doubt if any of them are better than the old *Early Frame*. A QUE-RIST. *New-York, March, 1847.*

ANSWER.—*Prince Albert* is the very best early pea we have ever cultivated. It is a week earlier than the best old varieties; excellent, and yields good crops.—ED.

.....

PRUNING APPLE-TREES.—The experience of C. SPRINGER, of Ohio, in cultivating apples without pruning the trees, (see last No.) affords an interesting instance of success; and I should have been pleased had he urged another point, as a main cause of the great superiority of his fruit, besides the omis-

sion of pruning. The ground, it appears, was manured annually for several years; and the great fertility thus induced was kept up by using the orchard as a hog-yard. This treatment, applied to a naturally fine soil, made it too rich for the Rhode-Island Greening; and would, perhaps, have been a sufficient explanation of his extraordinary success with trees only sixteen years old, without taking pruning at all into consideration.

Had his orchard not received this excellent management, and the trees stood till fifty years old, he would probably have found that a moderate and judicious thinning would have afforded better fruit, than to have permitted a dense mass of crooked and stunted branches. His experiment, however, proves most conclusively the superior importance of a fertile soil at the roots of the trees, to the attempt at a complete substitute by lopping the limbs; and these suggestions are merely made to direct attention to this point, while the disgraceful mutilation, so frequently practiced under the name of pruning, cannot be too strongly discouraged. J. J. T. *Macedon, 3mo. 8, 1847.*

.....

APPLES FROM ROCHESTER.—Dear Sir: As the subject of *Fruit* is now receiving something like due consideration, and as you hold a high place in the minds of those who cultivate it, your opinion, when fully expressed (with specimens before you,) will give a character to a variety which I am inclined to believe will find a response in the opinions of all persons.

I herewith send you, by express, specimens of varieties which have been (in part) kindly contributed by gentlemen of our city and county.

You will find the *Northern Spy*, *Baldwin*, *Red Canada*, *Newtown Pippin*, *Lacquier*, and *Yellow Bell-Flower*. In this region they are generally prized as amongst the very best apples ever produced. One object I have in sending the fruit is, to have you test the difference between the *Northern Spy* and the *Canada Red*. As with other things, both apples have their warm friends; and discussions are going on touching the *Northern Spy*, as regards its merit as a fruit, and of the tree as a *productive or non-productive one*.

You have already published a statement respecting its origin; but the simple mention of the fact, that the seeds were brought from Connecticut some forty years since, and planted in Bloomfield, in our state, may not be uninteresting.

I inclose you the certificate of Mr. HAND, of Mendon, who has raised the *Spy* in the greatest perfection known in this region. In addition, he has verbally communicated the following facts: That from *twenty-four* young trees he raised eighty barrels of apples in the year 1846, sixty-five of which he brought and sold me at two dollars per barrel, and the fifteen he kept being good, but not such as I now send you.

Mr. HAND probably takes more care of his trees than any other cultivator in this region; and the specimen of *Succars* marked with his name, I wish you to compare with the others in the box. Pruning is important with the *Northern Spy*, as the effect of the sun is to give them their beautiful coloring, and, many times, pine-apple flavor.

Another important characteristic is, that the trees of this kind put forth later than other trees, thus escaping late frosts; and as they are the last to ripen, they keep, as you have been before told, into June and July.

Several gentlemen are interested in having you receive the samples. Although we have not succeeded, thus far, in producing as many of the Baldwin and Newtown Pippins as our eastern friends, we prize them very much.

The Red Canada sent, are grown from young as well as old trees, which you will discover in the difference of size. The samples are as fine as were ever seen here, and the friends of that apple in preference to the Spy shall have all the benefit of it. I procured the larger samples of this sort from Mr. WAKELEE, and the smaller ones from Mr. UPTON, on the Ridge Road. The specimens of *Yellow Bellefleur*, and a part of the *Swaars*, were raised by Mr. P. MAJOR, of this city.

We shall be glad to have you notice the apples in your valuable paper, and hope they may reach you in safety. With respect, your friend, JAMES H. WATTS. *Rochester, Feb. 10, 1847.*

REMARKS.—Rochester is becoming famous for her fine apples, and the specimens obligingly sent us by Mr. WATTS would in no way detract from her Pomonal celebrity. They were truly admirable in size, beauty of appearance, and flavor.

The specimens of *Northern Spy* and *Canada Red* were the finest we have yet seen of these varieties. The *Northern Spy* needs no commendation of ours; it is undoubtedly one of the finest long-keeping winter apples known; remarkable for its freshness, juiciness, and delicious flavor.

The *Canada Red*, which we learn is supposed to have originated near Toronto, is a comparatively new apple to us; and if we judge solely by the fine samples sent us by Mr. WATTS, we cannot hesitate to rank it among the *very best* winter apples. By those who like the rich, brisk, sub-acid flavor of that grand old variety, the *Esopus Spitzenbergh*, it would be preferred to the *Northern Spy*, as it approaches more strongly the *Spitzenbergh* flavor. Both are remarkably fine fruits, and must soon come into very general cultivation. We shall give a figure and description of this fruit in our *Supplement to Fruits and Fruit Trees*.

The *Swaars* were fine specimens. Those carefully grown by Mr. Hand were finely formed, with a blush on the sunny side of each—highly aromatic, or *fennel-flavored*. We rank a fine *Swaar*, among apples, with the *Seckel* among pears; but it does not thrive except in deep mellow soils.

The specimens of Baldwin, *Yellow Bell-Flower*, and *Yellow Newtown Pippins*, were of average size and good flavor. The "*Lacquer*" resembles a little the *Domine* and *Rambo*.

We annex the following letter of the very successful grower of the *Northern Spy*:—ED.

I have grown the *Northern Spy* apple from fifteen to twenty years. I have, on the whole, found it a good bearer—fruit extremely fair-looking—size good; and with me it yields a better crop than the *Swaar*. I have kept a few in fine order until the 4th of July. The general crop I can keep till the last of May or 1st of June. The quality I

consider superior to any other apple. I have sold my crops in Rochester, and they have averaged at least one dollar a bushel for ten years last past; and I can sell this more readily than any other apple.

I find the trees put forth their leaves from ten days to a fortnight later than any other apple, and on that account are more secure from late spring frosts. They are fine smooth-barked, and thrifty growing trees, making, in the orchard, a finer-looking tree than any other in my vicinity, (Mendon.) RICHARD I. HAND. *Sept. 12.*

.....
SELECT LISTS OF FRUITS.—The Fruit Committee of the Genesee Valley Horticultural Society, having been requested to furnish small select lists of fruits, have published the following:

The Committee in presenting the following list wish to state that they have confined themselves wholly to such varieties as have been satisfactorily proved in this section.

So great is the diversity of taste in regard to the merits of fruits, and so numerous the excellent varieties from which to choose, that the Committee have experienced some difficulty in adopting a list even as extended as this.

There are no doubt many other varieties as good, and, in the opinion of some, perhaps better than some of these; but the Committee are unanimously agreed, that the excellence of this selection is beyond a doubt, and that the whole or a part, as circumstances require, may be cultivated with entire confidence. The names are placed in the order of ripening.

APPLES.

Summer Apples—July to September.—Early Harvest, Early Strawberry, Red Astracan, Sweet Bough, Golden Sweet.

Fall Apples—September to December.—Early Joe, Porter, St. Lawrence, Jersey Sweet, Gravenstein, Fall Jenetting.

Winter Apples—December to June.—Holland Pippin, Twenty Ounce, Fameuse, Red Canada, Peck's Pleasant, Yellow Bellflower, *Swaar*, Talmán Sweet, Rhode Island Greening, *Esopus Spitzenbergh*, Baldwin, Green Sweeting, *Northern Spy*, Roxbury Russet, *Yellow Newtown Pippin*.

PEARS.

Summer Pears—July to September.—Madeleine, Bloodgood, Osband's Summer, or *Summer Vergalieu*, Belle of Brussels, or *Belle of August*, Dearborn's Seedling, Bartlett.

Fall Pears—September to November.—Stevens' Genesee, White Doyenne or Vergalieu, Seckel, Onondaga or Swan's Orange, Gray Doyenne, Brown Beurre, Beurre Diel, Duchesse d'Angouleme.

Winter Pears—November to March.—Beurre d'Arenberg, Prince's St. Germain, Winter Nelis, Passe Colmar, Winter Bell or Pound.

CHERRIES.

Early Purple, Bigarreau d'Mai, May Duke, Elton, Black Tartarian, Black Eagle, Belle de Choisy, Yellow Spanish, Napoleon Bigarreau, Downer's Late, Large English Morello.

PLUMS.

Green Gage, Imperial Gage, Duane's Purple,

Huling's Superb, Smith's Orleans, Washington,
Coe's Golden Drop, Winter Dauson.

P. BARRY,	} Committee.
S. MILLER,	
A. SAWYER,	
J. W. BISSSELL,	
S. MORTONSON,	

Rochester, Jan. 11, 1847.

[The selection contains many fine fruits. "Holland Pippin" we perceive (perhaps by an error of the printer's) is placed among *winter* apples. It is properly an autumn apple in this country, though a winter fruit in England. It is a very valuable *cooking* fruit—often confounded in this country with the *Fall Pippin*, a fine dessert variety, (keeps till mid-winter at the north,)—which it resembles in growth and external appearance only. The *Early Joe* apple is a new variety, chiefly known about Rochester, and a most excellent fruit of very sprightly, agreeable flavor. We have large bearing trees of both these sorts. We would substitute *Flesh colored Bigarreau* for *Napoleon*, and *Columbia Plum* for *Duane's Purple*. But the Committee proceed on a sound principle in recommending only such as have been well tested in their district of the State.—ED.

THE "COOPER" APPLE.—We noticed in our January No. the fine specimens of an apple under this name, sent us by Rev. C. SPRINGER, of Ohio. As this fruit has a considerable reputation in Ohio, it was supposed by some who cultivated it there, to be a native fruit.

Mr. SPRINGER has, however, since traced this fruit to the orchard of Mr. WM. R. PUTNAM, of Marietta, O. Mr. PUTNAM is a gentleman of high standing, and a member of the State Board of Agriculture. In reply to Mr. SPRINGER's inquiry about the "Cooper" apple, he addressed Mr. S. the following letter:—

MARIETTA, Feb. 1, 1847.

Dear Sir—Your note of the 29th ultimo came safely to hand. In answer, I will observe that in the year 1795, I received from Mr. ISRAEL PUTNAM, of Connecticut, a quantity of scions of apple trees which I engrafted; among which were (according to the catalogue preserved) the "Cooper" Apple, the Putnam Russet, and a great variety of others. Whether the Putnam Russet is the same as the Roxbury, I know not. All the Putnam R. in this vicinity, sprung from those sent here by Mr. Putnam, as aforesaid, and the Cooper apple also.

I remain, dear sir, your obedient servant,

WM. R. PUTNAM.

Rev. C. SPRINGER, *Meadow Farm, O.*

T. H. HUMRICKHOUSE, Esq., of Coshocton, Ohio, a well known amateur, has suggested for our consideration that the Cooper may be synonymous with the "Fall Harvey" of New-England. But we think not, as the Cooper has a short stock and is higher flavored. Mr. H. further says, "I consider the Cooper an autumn fruit, though I have kept it till winter."

We presume this apple will prove synonymous with a fruit now known and cultivated about Hartford, as the *Belle et Bonne* ("bella-bound" of some farmers there.) We find the two fruits agree as nearly as possible, judging from our remembrance

and careful memoranda of each. Specimens that we have seen of both these apples, were remarkable for the *smallness of the core*; in form, size, color and beauty of the fruit they agree. What the true name of the Hartford apple is, if it is a described variety, we cannot say, but the coming season will probably enable us to decide.

We ought to make a remark here, relating to the many new varieties of fruit claimed to have originated in the Western States. During the last year, it has been pretty satisfactorily ascertained that several of the leading western sorts, are old and well known eastern varieties—for example—"Putnam Russet," is Roxbury Russet—"Marietta Seek-no-further," is Westfield Seek-no-further—the "Little Pearmain," is probably the American Golden Russet—the "Detroit" of Cincinnati, is an old Belle Fleur—the "Newtown Spitzenberg" of the same place is the Vandervere, &c. The utmost confusion and uncertainty prevails in the west, touching the names of fruits, and we must look to the CINCINNATI HORTICULTURAL SOCIETY, and to intelligent cultivators west of the Alleghanies, gradually to rectify all this medley of unchristened fruits. Nothing is so destructive to pomological accuracy, as this prevalence of half a dozen names for the same fruit. As soon as the standard name is really ascertained, let all local synonyms be dropped. The possession of a good experimental orchard by the Cincinnati Society would greatly expedite this matter—and in the absence of that, a complete set of wax-models or fac similes of fruits, such as were shown at the Fair of the American Institute last autumn, would be a valuable assistance.

STRAWBERRIES.—I care little for a great variety of this fruit, but I would much like to know what *provers* of the strawberry, think are the *two best sorts* for family use—one early, and one at the middle season—the latter for a full crop. I am yours, &c. J. McC. Baltimore, March 2, 1847.

[We would recommend, if confined to two sorts only, *Large Early Scarlet*, the best of all early sorts, for the first; and either *Hovey's Seedling*, or *Black Prince*, for the second. The two latter are both large fruits, productive and excellent. *Hovey's Seedling* has a mild sub-acid flavor, and is perhaps best adapted to light soils. *Black Prince* is a richer flavored berry, and likes a strong soil.

The *Large Early Scarlet* is a perfect "blossomed" sort, and always sets its fruit well. The other two are *pistilate* and must, to give large crops, be planted with a proportion of one in 10 or 15 plants of some *staminate* sort, as the *Early Virginia*.—Ed.]

SCARCE PLANTS.—We notice in an English gardening journal, that *Rene Langlier*, nursery man St. Helier, Isle of Jersey, advertises his Pear, "Langlier's Buerre," at 3s. 6d. sterling, (about 75 cents) each, and the *Grosse Caiabash*, a "perfectly melting fruit, measuring from eight to eight and a half inches, weighing from twenty to twenty four ounces, and ripening in November;" price 5s. (about \$1.20) each.

In the *Gardener's Chronicle*, London, Mr. Warren, the Boston nurseryman, now in England, ad-

vertises for subscriptions to the two new Camellias, *Wilderii* and *Mrs. A. Wilder*, of which he now holds the stock, at *ten guineas* the pair, deliverable in the autumn of 1847.

TO FIX SHIFTING SAND-BANKS.—Dear Sir: In your excellent work, "The Horticulturist," from which I have already learned very much, I find an inquiry how to fix shifting sand-banks? and as I, in my native country, often was engaged in that business, I hope you will not think it improper for me to write a few words about it.

In Sweden, Denmark, and Holland, there were formerly, more than now, shifting sand, or, as it there is called "flighing" sand, in great extent; and a part of the western sea-shore of Denmark, say about 150 miles in length, was nothing but such sand, often destroying whole villages. However, several plants, as *Elymus arenarius* (upright sea-grass,) *Arundo epigeios* (wood reed,) *Carex arenaria* (sand-sedge,) coarse kinds of grasses, and even *Juncus conglomeratus* (common rush,) may be used for fixing it, or making it solid. Nothing, however, is equal to that species of reed called *Arundo arenaria*, that the wise Providence evidently created just for this purpose. It only grows and thrives in "flighing" sand; and it sends its strong and spreading roots out, more than fifty feet in length, at each joint making a young plant, and dies gradually off, when the sand is fixed, giving place for grasses, particularly *Agrostis capillaris*, *Aira canescens*, *Festuca duriuscula*, *Nardus stricta*, and sometimes *Festuca ovina*, until it by and by gets intermixed with *Erica vulgaris* and *tetralix* (common heath,) making at last, of what was once a driving sand-field, a tolerable good pasture for sheep.

The propagation of *Arundo arenaria* is very easy, and is best done from seed, sown in August and September, as soon as ripe. The method commonly adopted in Europe, is to put rows of brushwood or sods across the sand in different directions, in order to retain the sand a little, that it should not blow from the seed. On each side plant a row of *Arundo arenaria*, just as you would plant potatoes, placing a whole ear in each hole; the plants will grow very rapidly, and in a short time cover a large place. But on shifting sands of small extent, or where it is desirable to plant shrubs and trees, in order to fix a border or bank, even when very much exposed to high winds, several kinds are used, as the white birch (*Betula alba*), dwarf birch (*Betula nana*), gray willow (*Salix cinerea*), European alder (*Alnus glutinosa*), and *Alnus incana*; nothing, however, is better fit for this purpose than the sea buckthorn (*Hippophae rhamnoides*), which, among the shrubs, takes the same rank as *Arundo arenaria* among grasses; and perhaps *Hippophae canadensis* or *argentea*, the *Shepherdia* or buffalo berry, as it is called here in some places, will do well too.

If any person wishes to plant larger growing trees, the silver poplar or abele (*Populus alba*), or *nivea*, is preferable to all, I think, as it has very numerous strong spreading roots, and will stand the high winds perfectly well. It grows most rapidly, and is content with a poor soil.

Among ornamental shrubs, I always succeeded best in planting the common lilac (*Syringa vulga-*

ris), *Rosa pimpinellifolia*, and the Scotch rose (*R. spinosissima*), the broom (*Spartium scoparium*), and furze (*Ulex europæus*.) I decidedly prefer fall planting, as the sand is more firm in autumn and winter than in spring; and even cuttings from poplars and willows will readily strike roots when planted at that time.

Perhaps there may be some of your correspondents who know less of this matter than yourself, and to whom they will be useful; and I hope you will receive these hints as a poor reward for what I have already learned from your journal.

As I am a foreigner, only for a few months acquainted with your language, I hope you will kindly excuse my un-English style, and, as my whole life has been devoted to the study of botany and gardening for at least 25 years, and as in the profession of horticulture I have travelled over a great part of Europe, I hope to have been able to gather some experience, which I shall be glad to relate to you, as soon as I can explain my ideas better in your language.
R. NELSON. *Indian Hill, near Newburyport, Mass. Feb 27, 1847.*

[MR. NELSON's remarks are interesting to railroad companies who are troubled with sliding sand-banks in "deep cuts," as well as to those residing on the sea-side.—Ed.]

N. Y. STATE AGRICULTURAL SOCIETY.—At a meeting of the State Ag. Society at Albany, March 11, 1847, the president in the chair, the following resolution was adopted for the government of the committees on fruit:

Resolved, That the work entitled "THE FRUITS AND FRUIT TREES OF AMERICA" by A. J. DOWNING, be the established authority of the N. Y. S. Ag. Society, in classifying the varieties and nomenclature of fruits in our future exhibitions.

A. J. Downing, of Newburgh, and J. W. Bissell, of Rochester, were added to the committee on fruit appointed under the resolution of last year, and continued at the last annual meeting. The other members of the committee are, Lewis F. Allen, of Buffalo, chairman; Hon. Samuel Young, of Saratoga; and Dr. Herman Wendell, of Albany.

The president stated that he had, in company with the Secretary, visited Saratoga Springs, at the request of gentlemen of that place, and had examined various locations proposed for the show-grounds of the Fair in September; that several of these were in the highest degree eligible; and that advice had been given to the members of the executive committee there as to the location which was most desirable.

The secretary reported the Premium List, as published, and was authorized to procure two hundred and fifty copies of the same for distribution.—The amount of cash premiums, \$3,004; 131 volumes of agricultural works; 65 volumes Transactions; 59 diplomas, and 15 silver medals; amounting in all to \$3,472.

The secretary reported that he had received returns from 39 county societies, and that their reports were, in many cases, of very great interest, and that all reports received had been prepared for the Transactions. Only seven societies from which reports had not been received; and that he was in

correspondence with the officers of these societies, and expected returns from them all. Only 12 counties in the state in which there are not organized societies.

From these reports it appears, that in 19 counties the yield of Indian corn exceeds 80 bushels to the acre. In 11 counties crops are reported exceeding 100 bushels. The largest yield in

Cortland county, of.....	154 bushels,
Oswego ".....	146½ "
Orange ".....	139 "
Tioga ".....	125 "
Oneida ".....	123½ "

The largest yield of wheat is from Ontario, fraction short of 60 bush. per acre, on upwards of 3 acres.

In eight counties the yield of oats exceeded 70 bushels per acre. The largest yield, 102 bushels, in Oneida. B. P. JOHNSON, *Secy.*

ERRATA.—Our printer's devil, who we imagine composes while standing on his head—after the manner of Quilp's boy—took the liberty of reversing the position of two cuts in our last number—the *Double Crimson Currant*, and the *Silver Bell*, so that the clusters of blossoms hang *up* instead of *down*. If he will oblige us by endeavoring to hang himself by "a slender peduncle," in the same position, he will discover the vital value of the law of gravitation.

MASSACHUSETTS HORTICULTURAL SOCIETY.

PREMIUM LIST FOR 1847—(CONCLUDED FROM P. 440.)

PREMIUMS FOR PLANTS, FLOWERS AND DESIGNS.

DISPLAY OF GREEN HOUSE PLANTS IN POTS THROUGH THE SEASON.

For the best display of Green House Plants in pots through the season, the Appleton Gold Medal, valued at..... \$40 00
For the 2d best display of do., the Society's Silver Gilt Medal, valued at..... 15 00

Provided, however, That whatever amount may be awarded during the season for the exhibition of Pot Plants, to the person who shall be entitled to said medals, shall be deemed as constituting a part of their value.

DISPLAY OF GREEN HOUSE PLANTS IN POTS.

To be exhibited at the opening of the hall, on the first Saturday in Nov.

PELARGONIUMS.—*Class I.*—For the best six new and rare varieties, grown in six inch pots..... \$6 00
For the 2d best do..... 4 00
Class II.—For the best six varieties of any sort, grown in large pots..... 6 00
For the 2d best do..... 4 00
ROSES.—For the best six varieties of Tea, Bourbon, Noisette, or Bengal..... 6 00
For the 2d best do..... 4 00
For the 3d best do..... 2 00
CUT FLOWERS.—For the best display..... 3 00
For the 2d best do..... 2 00
FUCHSIAS.—For the best six varieties..... 6 00
For the 2d best do..... 4 00
CACTUS.—For the best six varieties..... 3 00
For the 2d best do..... 2 00
CALCEOLARIAS.—For the best six varieties..... 3 00
For the 2d best do..... 2 00
CINERARIAS.—For the best six varieties..... 3 00
For the 2d best do..... 2 00
HEATHS.—For the best varieties..... 3 00
For the 2d best do..... 2 00
VARIOUS SORTS.—For the best display of various sorts of Green House Plants, not less than twelve pots... 8 00
For the 2d best display..... 5 00
HYACINTHS.—To be awarded second Saturday in May. For the best display, not less than twenty varieties... 5 00
For the 2d best do..... 3 00
TULIPS.—To be awarded the third Saturday in May. For the best thirty distinct varieties..... 8 00
For the 2d best do..... 6 00
For the 3d best do..... 3 00
PANSIES.—To be awarded the fourth Saturday in May. For the best twelve distinct varieties..... 4 00

For the 2d best do..... \$3 00
For the 3d best do..... 2 00
HAWTHORNS.—To be awarded the fourth Saturday in May. For the best display..... \$3 00
For the 2d best do..... 2 00
HARDY AZALEAS.—To be awarded fourth Saturday in May. For the best display..... \$3 00
For the 2d best do..... 2 00
SHRUBBY PEONIES.—To be awarded fourth Saturday in May. For the best six varieties..... \$5 00
For the 2d best do..... 4 00
For the best display..... 3 00
HERBACEOUS PEONIES.—To be awarded 2d Saturday in June. For the best twelve flowers, having regard to the number of varieties..... \$5 00
For the 2d best do..... 4 00
For the best display..... 3 00
PINKS.—To be awarded third Saturday in June. For the best six distinct varieties..... 4 00
For the 2d best do..... 3 00
For the best display..... 2 00
RANUNCULUS.—To be awarded in June. For the best display..... 5 00
For the 2d best do..... 3 00
ANEMONES.—To be awarded in June. For the best display..... 5 00
For the 2d best do..... 3 00
HARDY ROSES.—To be awarded third Saturday in June. *Class I.*—For the best thirty distinct varieties..... 8 00
For the 2d best do..... 6 00
For the 3d best do..... 4 00
For the best display..... 3 00
Class II.—For the best twelve distinct varieties... 5 00
For the 2d best do..... 3 00
For the 3d best do..... 2 00
Class III.—HARDY PERPETUAL ROSES.—For the best ten varieties..... 5 00
For the 2d best do..... 4 00
For the best display..... 3 00
PRAIRIE ROSES.—For the best display..... 4 00
For the 2d best do..... 3 00
CARNATION and PICOTE PINKS.—To be awarded third Saturday in July. For the best ten varieties..... \$5 00
For the 2d best do..... 4 00
For the best display..... 3 00
MAGNOLIAS.—For the best display through the season, 3 00
For the 2d best do..... 2 00
HARDY RHODODENDRONS.—For the best display of the season..... 3 00
For the 2d best do..... 2 00
DOUBLE HOLLYHOCKS.—To be awarded third Saturday in July. For the best display..... \$3 00

For the 2d best do.,	2 00
For the 3d best do.,	1 00
DOUBLE BALSAMS.—To be awarded second Saturday in August.	
For the best display,	\$3 00
For the 2d best do.,	2 00
For the 3d best do.,	1 00
PHLOXES.—To be awarded third Saturday in August.	
For the best ten distinct varieties,	6 00
For the 2d best do.,	4 00
For the 3d best do.,	3 00
GERMAN ASTERS.—To be awarded second Saturday in September.	
For the best display,	\$4 00
For the 2d best do.,	3 00
For the 3d best do.,	2 00

BOUQUETS, WREATHS, DESIGNS, &c.

Premiums to be awarded at the Annual Exhibition.

VASE BOUQUETS.—For the best pair suitable for the	
Bradlee vases,	\$10 00
For the 2d best do.,	6 00
For the best pair for the Society's marble vases,	10 00
For the 2d best do.,	6 00
PARLOR BOUQUETS.—For the best pair suitable for the parlor,	5 00
For the 2d best do.,	3 00
For the 3d best do.,	2 00
HAND BOUQUETS.—For the best pair,	3 00
For the 2d best do.,	2 00
For the 3d best do.,	1 00
GRASS BOUQUETS.—For the best composed of grass,	3 00
For the 2d best do.,	2 00
BOUQUETS COMPOSED OF INDIGENOUS FLOWERS.—For the best,	3 00
For the 2d do.,	2 00
MOSS VASES, BASKETS OF FLOWERS, or any other neat, appropriate designs, suitable for the occasion.—For the best,	12 00
For the 2d best do.,	8 00
For the 3d do.,	6 00
For the 4th do.,	5 00
WREATHS.—For the best, not less than thirty feet in length,	10 00
For the 2d best do.,	5 00
For the 3d best do.,	3 00
DARLIAS.—To be awarded fourth Saturday in September.	
Division A.—Premier Prize.—For the best twelve dissimilar blooms, the Society's Silver Medal,	\$5 00
Specimen Bloom.—For the best flower,	3 00
Various Colors.—For the best yellow, buff or orange; purple or maroon; crimson or claret; very dark; white; edged or tipped; scarlet; pink or rose; a premium of \$1 each,	8 00
Division B.—Class I.—For the best twenty-four dissimilar blooms,	8 00
For the 2d best do.,	5 00
Class II.—For the best eighteen dissimilar blooms,	6 00
For the 2d best do.,	4 00
Class III.—For the best twelve dissimilar blooms,	5 00
For the 2d best do.,	3 00
CHRYSANTHEMUMS.—To be awarded Nov. 13.	
For the best twelve distinct varieties, in trusses,	3 00
For the 2d best do.,	2 00
HERBACEOUS PERENNIALS.—For the best display through the season, the Society's Silver Medal,	5 00
For the 2d best do.,	4 00
For the 3d best do.,	3 00
ANNUALS.—For the best display through the season, the Society's Silver Medal,	5 00
For the 2d best display,	4 00
For the 3d best do.,	3 00
INDIGENOUS PLANTS.—For the best display of the season,	3 00
For the 2d best do.,	2 00
CAMELLIAS.—To be awarded second Saturday in February.	
For the best twelve varieties of cut flowers, with foliage,	\$8 00
For the 2d best do.,	5 00
CHINESE PRIMROSE.—To be awarded second Saturday in February	
For the best six varieties in pots,	\$3 00
For the 2d best do.,	2 00

GREEN-HOUSE AZALEAS.—To be awarded second Saturday in March.	
For the best six varieties in pots,	\$6 00
For the 2d best do.,	4 00

PREMIUMS TO BE AWARDED AT THE WEEKLY EXHIBITIONS.

For the best six Pot Plants, of different varieties,	\$2 00
For the 2d best do.,	1 00
For the best large Bouquet for vases or parlor, composed of flowers gracefully arranged,	2 00
For the 2d best do.,	1 00
For the best six hand Bouquets,	2 00
For the 2d best do.,	1 00

PREMIUMS FOR VEGETABLES.

ASPARAGUS.—For the earliest and best, not less than three bunches,	\$5 00
BEETS.—For the best, (pure blood beet,) during the season, not less than twelve roots,	5 00
BROCCOLI.—For the best three heads,	5 00
BEANS.—For the best and earliest peck of string beans, composed of the best and earliest Lima beans, not less than two quarts,	3 00
For the best and earliest variety of shell beans,	4 00
CUCUMBERS.—For the best pair under glass, previous to the first Saturday of June,	5 00
For the 2d best do.,	3 00
For the best and earliest, of open culture,	3 00
CAULIFLOWERS.—For the best and largest, during the season, not less than three heads,	5 00
For the 2d best do.,	3 00
CORN.—For the best and earliest sweet corn, not less than twelve ears,	3 00
CABBAGE.—For the best drumhead cabbage, during the season, not less than three heads,	5 00
For the 2d best do.,	3 00
For the best Savoy cabbage, during the season, not less than three heads,	3 00
For the 2d best do.,	2 00
EGG PLANTS.—For the best display during the season,	5 00
LETTUCE.—For the best six heads, before the 1st Saturday in July,	3 00
POTATOES.—For the best new seedling, of superior quality, for the table,	10 00
For the best and earliest peck, previous to Aug. 1,	3 00
PEAS.—For the best and earliest peck in June,	3 00
RHUBARB.—For the largest and best, previous to the first Saturday in July, not less than twelve stalks,	5 00
SQUASHES.—For the best pure Canada squashes, not less than six in number,	5 00
For the greatest variety exhibited during the season,	5 00
TOMATOES.—For the best and earliest, not less than one dozen,	5 00
VEGETABLES.—For the best display and greatest variety at the weekly exhibitions, during the season,	10 00
For the 2d best do.,	5 00
For the best display and greatest variety at the annual exhibition,	10 00
For the 2d best do.,	5 00
For any new variety of vegetables suitable for the table, and worthy of cultivation, other than seedling potatoes,	6 00
CELERY.—For the best and largest blanched, not less than six roots,	5 00
For the 2d best do.,	3 00
For the Committee to establish premiums,	

S. WALKER, Chairman.

RULES AND REGULATIONS.

1. If, at any meeting, the Committees for awarding premiums, shall be of opinion that the time assigned in the Premium List, for the exhibition of any Fruits, Flowers, or Vegetables, will be too early or too late, they shall have power to alter the time of exhibition, giving reasonable notice thereof to the Society at the time of such change.
2. All Fruits, Flowers and Vegetables, placed in competition for premiums, are to be the growth of the competitors.
3. All articles exhibited for premium must be placed in the Stands by 11 o'clock, A. M., and no production in the Fruit

Flower or Vegetable Department, will be admitted *for premium* after that time. The rule will be strictly adhered to.

4. All articles exhibited shall remain in the Hall until two o'clock, P. M., when they will be delivered to the contributors, unless otherwise directed.

5. No premiums on Fruits are to be awarded, unless specimens of described the same shall have been presented to the Committee, to enable them to judge of the quality.

6. Committees shall have the discretionary power of withholding premiums, if, in their opinion, the articles exhibited do not merit them.

7. In awarding premiums on plants in pots, special reference will be had to the beauty of the specimens, profusion of bloom, and evidence of superior cultivation. Inferior specimens will be excluded by the judges from competition.

8. Gratuities will be awarded by the Committees for any new or rare Fruits, Flowers, Plants, or any other object of particular interest, and for which no special premium has been offered. Flowers attached to a plain surface by any method, will not be considered bouquets, but will be specified as designs.

9. When specimens are presented for a name, the owner is requested to give all the information in his possession as to the origin, and the name by which they have usually been known.

10. When the Committee have good reason to believe that any information has been withheld, as to the name of specimens, they will decline to give their opinion. They are ready at all times to aid and assist, to the utmost of their ability, in ascertaining the true name of any new production presented under these regulations, but not otherwise.

11. The contributors of Fruits for exhibition or premium, are recommended to present the same in the dishes or baskets of the society, or in new boxes of their own.

12. The Committees are authorized, and requested, to remove all ordinary specimens from the table.

13. No Flower, Fruit, or Vegetable, will be considered as deserving a premium, unless it possesses points of superior excellence; and no object for which a premium has been awarded, will be entitled to another during the season—(the Special Prize List of Fruits excepted.)

14. It is also required that the Fruits, Flowers and Vegetables exhibited, should be accompanied by brief observations on the mode of cultivation, if *peculiar*, together with any other remarks of utility.

15. Any person to whom a premium or gratuity has been awarded, whether in money, medals or plate, may receive either, of like valuation, at his option.

16. The regulations of the Society, forbidding the handling of Fruits, Flowers, &c., will be strictly adhered to.

17. No person allowed to be in the Hall while the Committee are awarding the premiums.

☞ The foregoing, having received the approval of the Executive Committee, and the regulations confirmed by a vote of the Society, is now published as the list of premiums for the current year.

MARSHALL P. WILDER, *President*.

E. C. R. WALKER, *Recording Secretary*.
Boston, Feb. 1, 1847.

PENNSYLVANIA HORTICULTURAL SOCIETY.

The monthly meeting for March, was held on Tuesday evening the 16th, in the grand saloon of the Philadelphia Museum Building, the President in the chair.

The display was remarkably fine, considering the frostiness of the weather; the profuse bloom of a number of the finest specimens of Azaleas and Camellias, were destroyed by its severity. The President's gardener exhibited a beautiful collection of plants—Azaleas, Rhododendrons, Camellia *rosa-sinensis*, etc.; also, handsome baskets of cut flowers. Mr. Buist, a fine collection of Azaleas, Heaths, Acacias, etc. Peter Raabe, a number of Camellias, among which a very large and fine plant of the double white; also, a beautiful urn of cut flowers. Robert Kilvington, an interesting collection of indigenous plants in flower and bouquets. Very splendid displays of cut Camellias, were shown by Peter Makenzie, Andrew Dryburgh, and John Sherwood. Anthony Felton presented two large collections of full grown vegetables.

Premiums were awarded as follows:

For the best Rhododendrons in pots, three specimens, to Wm. Hall, gardener to Caleb Cope; for the best Azaleas, six specimens, to the same; for the best and most interesting collection of plants in pots, to Robert Buist; for the second best, to Peter Raabe; for the third best, to Robert Kilvington; and the fourth best, to Benjamin Galliss, gardener to Jacob Sni-

der, jr. For the best display of Indigenous plants in flower in pots, to Robert Kilvington. For the best Bouquet, to Peter Raabe; for the second best, to Patrick Gallagher, gardener to Miss Gratz. For the best and second best Basket, to Wm. Hall, gardener to the President.

For the most interesting and next most interesting displays of Vegetables, to Anthony Felton.

The President announced that he had received a communication, which was read, from Gen Patterson, the first Vice-President, dated from Tampico, purporting that he had forwarded a package containing Air plants, Cacti, etc., as a present to the Society; which had been received and distributed by the appropriate Committee.

Ordered, That the communication be entered in the minutes, and the thanks of the Society be tendered for the acceptable gift.

The Library Committee reported that Robert Buist had presented a copy of the second edition of his Treatise on the Culture of the Rose, to the Society.

Ordered, That the thanks be presented to the donor.

Honorary Members Elected—Marshall P. Wilder, President of the Massachusetts Horticultural Society; J. P. Cushing, Watertown, and B. V. French, Braintree, Mass.

THOMAS P. JAMES, *Rec. Sec.*



Horticulturist

AND

JOURNAL OF RURAL ART AND RURAL TASTE.

VOL. I.

MAY, 1847.

No. 11.

CHARLES DICKENS, in that unlucky visit to America in which he was treated like a spoiled child, and left it in the humor that often follows too lavish a bestowal of sugar plums on spoiled children, made now and then a remark in his characteristic vein of subtle perceptions. Speaking of some of our wooden villages—the houses as bright as the greenest blinds and the whitest weather-boarding can make them, he said it was quite impossible to believe them real, substantial habitations. They looked “as if they had been put up on Saturday night, and were to be taken down on Monday morning!”

There is no wonder that any tourist, accustomed to the quiet and harmonious colour of buildings in an English landscape, should be shocked at the glare and rawness of many of our country dwellings. Brown, the celebrated English landscape gardener, used to say of a new red brick house, that it would “put a whole valley in a fever.” Some of our freshly painted villages, seen in a bright summer day, might give a man with weak eyes a fit of the ophthalmia.

We have previously ventured a word or two against this national passion for white paint, and it seems to us a fitting moment to

look the subject boldly in the face once more.

In a country where a majority of the houses are built of wood, the use of some paint is an absolute necessity in point of economy. What the colors of this paint are, we consider a matter no less important in point of taste.

Now, genuine white lead, (the color nominally used for most exteriors) is one of the dearest of paints.* It is not therefore economy which leads our countrymen into such a dazzling error. Some mistaken notions, touching its good effect, in connection with the country, is undoubtedly at the bottom of it. “Give me,” says a retired citizen, before whose eyes, red brick and dusty streets have been the only objects for years, “give me a white house with bright green blinds in the country.” To him, white is at once the newest, cleanest, smartest, and most conspicuous colour which it is possible to choose for his cottage or villa. Its freshness and newness he prizes as a clown does

* We say *genuine* white lead, for it is notorious that four-fifths of the white paint sold under this name in the United States, is only an imitation of it, composed largely of *whiting*. Though the first cost of the latter is little, yet as it soon rubs off and speedily requires renewal, it is one of the dearest colours in the end.

that of his Sunday suit, the more the first day after it comes from the tailor, with all the unsullied gloss and glitter of gilt buttons. To possess a house which has a quiet air, as though it might have been inhabited and well taken care of for years, is no pleasure to him. He desires every one to know that he, Mr. BROADCLOTH, has come into the country and built a NEW house. Nothing will give the stamp of newness so strongly as white paint. Besides this, he does not wish his light to be hidden under a bushel. He has no idea of leading an obscure life in the country. Seclusion and privacy are the only blue devils of his imagination. He wishes every passer by on the river, railroad or highway, to see and know that this is Mr. BROADCLOTH'S villa. It must be *conspicuous*—therefore it is painted WHITE.

Any one who has watched the effect of example in a country neighborhood, does not need to be told that all the small dwellings that are built the next season after Mr. BROADCLOTH'S new house, are painted, if possible, a shade whiter, and the blinds a little more intensely verdant—what the painters triumphantly call “French green.” There is no resisting the fashion; those who cannot afford paint, use whitewash; and whole villages, to borrow Miss Miggs' striking illustration, look like “whitenin' and supelters.”

Our first objection to *white*, is, that it is too glaring and conspicuous. We scarcely know any thing more uncomfortable to the eye, than to approach the sunny side of a house in one of our brilliant mid-summer days, when it revels in the fashionable purity of its colour. It is absolutely painful. Nature, full of kindness for man, has covered most of the surface that meets his eye in the country, with a soft green hue—at once the most refreshing and most grateful to the

eye. These habitations that we have referred to, appear to be coloured on the very opposite principle, and one needs, in broad sunshine, to turn his eyes away to relieve them by a glimpse of the soft and refreshing shades that every where pervade the trees, the grass, and the surface of the earth.

Our second objection to white is, that it does not harmonize with the country, and thereby mars the effect of rural landscapes. Much of the beauty of landscape depends on what painters call *breadth of tone*—which is caused by broad masses of colours that harmonize and blend agreeably together. Nothing tends to destroy breadth of tone so much as any object of considerable size, and of a brilliant white. It stands harshly apart from all the soft shades of the scene. Hence landscape painters always studiously avoid the introduction of white in their buildings, and give them instead, some neutral tint—a tint which unites or contrasts agreeably with the colour of trees and grass, and which seems to blend into other parts of natural landscape, instead of being a discordant note in the general harmony.

There is always, perhaps, something not quite agreeable in objects of a dazzling whiteness, when brought into contrast with other colours. Mr. PRICE, in his *Essays on the Beautiful and Picturesque*, conceived that very white teeth gave a silly expression to the countenance—and brings forward, in illustration of it, the well known *soubriquet* which HORACE WALPOLE bestowed on one of his acquaintances—“the gentleman with the foolish teeth.”

No one is successful in rural improvements, who does not study nature, and take her for the basis of his practice. Now, in natural landscape, any thing like strong and bright colours is seldom seen, except in very minute portions, and least of all pure white

—chiefly appearing in small objects like flowers. The practical rule which should be deduced from this, is, to avoid all these colours which nature avoids. In buildings, we should copy those that she offers chiefly to the eye—such as those of the soil, rocks, wood, and the bark of trees,—the materials of which houses are built. These materials offer us the best and most natural study from which harmonious colours for the houses themselves should be taken.

WORDSWORTH, in a little volume on the Scenery of the Lakes, remarks that the objections to white as a colour, in large spots or masses, in landscapes, are insurmountable. He says it destroys the *gradations* of distances, haunts the eye, and disturbs the repose of nature. To leave some little consolation to the lovers of white lead, we will add that there is one position in which their favorite colour may not only be tolerated, but often has a happy effect. We mean in the case of a country house or cottage, deeply imbowered in trees. Surrounded by such a mass of foliage as SPENCER describes,

In whose *enclosed shadow* there was set
A fair pavilion *scarcely to be seen*,

a white building often has a magical effect. But a landscape painter would quickly answer, if he were asked the reason of this exception to the rule, “it is because the building does not appear white.” In other words, in the shadow of the foliage by which it is half concealed, it loses all the harshness and offensiveness of a white house in an open site. We have, indeed, often felt, in looking at examples of the latter, set upon a bald hill, that the building itself would, if possible, cry out,

“Hide me from day’s *garish* eye.”

Having entered our protest against the general use of white in country edifices, we

are bound to point out what we consider suitable shades of colour.

We have said that one should look to nature for hints in colour. This gives us, apparently, a wide choice of shades, but as we ought properly to employ modified shades, taken from the colours of the materials of which houses are constructed, the number of objects is brought within a moderate compass. Houses are not built of grass, or leaves, and there is, therefore, not much propriety in painting a dwelling green. Earth, stone, bricks, and wood, are the substances that enter mostly into the structure of our houses, and from these we would accordingly take suggestions for painting them.

Sir JOSHUA REYNOLDS, who was full of an artistical feeling for the union of a house with its surrounding scenery, once said, “If you would fix upon the best colour for your house, turn up a stone, or pluck up a handful of grass by the roots, and see what is the colour of the soil where the house is to stand, and let that be your choice.” This rule was not probably intended to be exactly carried into general practice, but the feeling that prompted it was the same that we are endeavoring to illustrate—the necessity of a unity of colour in the house and country about it.

We think, in the beginning, that the colour of all buildings in the country, should be of those *soft and quiet shades*, called neutral tints, such as fawn, drab, gray, brown, &c., and that all positive colours, such as white, yellow, red, blue, black, &c., should always be avoided; neutral tints being those drawn from nature, and harmonizing best with her, and positive colours being most discordant when introduced into rural scenery.

In the second place, we would adapt the

shade of colour, as far as possible, to the expression, style, or character of the house itself. Thus, a large mansion may very properly receive a somewhat sober hue, expressive of dignity; while a country house, of moderate size, demands a lighter and more pleasant, but still quiet tone; and a small cottage should, we think, always have a cheerful and lively tint. Country houses, thickly surrounded by trees, should always be painted of a lighter shade than those standing exposed. And a new house, entirely unrelieved by foliage, as it is rendered conspicuous by the very nakedness of its position, should be painted several shades darker than the same building if placed in a well wooded site. *In proportion as a house is exposed to view, let its hue be darker, and where it is much concealed by foliage, a very light shade of colour is to be preferred.*

WORDSWORTH remarks, in speaking of houses in the Lake country, that many persons who have heard white condemned, have erred by adopting a *cold slaty* colour. The dullness and dimness of hue in some dark stones, produces an effect quite at variance with the cheerful expression which small houses should wear. "The flaring yellow," he adds, "runs into the opposite extreme, and is still more censurable. Upon the whole, the safest colour, for general use, is something between a cream and a dust colour."

This colour, which WORDSWORTH recommends for general use, is the hue of the English freestone, called *Portland stone*—a *quiet fawn* color, to which we are strongly partial, and which harmonizes perhaps more completely with all situations in the country than any other that can be named. Next to this, we like a *warm gray*, that is, a drab mixed with a very little red and some yellow. *Browns* and *dark grays* are suitable

for barns, stables and outbuildings, which it is desirable to render inconspicuous—but for dwellings, unless very light shades of these latter colours are used, they are apt to give a dull and heavy effect in the country.*

A very slight admixture of a darker colour is sufficient to remove the objections to white paint, by destroying the *glare of white*, the only colour which reflects *all* the sun's rays. We would advise the use of soft shades, not much removed from white, for small cottages, which should not be painted of too dark a shade, which would give them an aspect of *gloom*, in the place of *glare*. It is the more necessary to make this suggestion, since we have lately observed that some persons, newly awakened to the bad effect of white, have rushed into the opposite extreme, and coloured their country houses of such a sombre hue that they give a melancholy character to the whole neighborhood around them.

A species of monotony is also produced by using the same neutral tint for every part of the exterior of a country house. Now there are features, such as window facings, blinds, cornices, etc., which confer the same kind of expression on a house that the eyes, eyebrows, lips, &c. of a face, do upon the human countenance. To paint the whole house plain drab, gives it very much the

* It is very difficult to convey any proper idea of shades of colour by words. In our "*Cottage Residences*," we have attempted to do so by a plate showing some of the tints. We would suggest to persons wishing to select accurately, shades for their painter to copy, to go into a stationer's and examine a stock of tinted papers. A great variety of shades in agreeable neutral tints, will usually be found, and a selection once made, the colour can be imitated without risk of failure. The paper of our *frontispiece*, may be taken as an example of a fawn colour of the *lightest* shade we would ever employ for a house—four or five shades darker is the colour of the English Portland stone. The *gray* of the cover of this journal, is as dark a shade as wooden houses can usually be painted with good effect.

same dull and insipid effect that colourless features — (white hair, pale eye-brows, lips, &c. &c.) do the face. A certain sprightliness is therefore always bestowed on a dwelling in a neutral tint, by painting the bolder projecting features of a different shade. The simplest practical rule that we can suggest for effecting this, in the most satisfactory and agreeable manner, is the following: Choose paint of some neutral tint that is quite satisfactory, and let the facings of the windows, cornices, &c. be painted several shades darker, of the same colour. The blinds may either be a still darker shade than the facings, or else the darkest green.* This variety of shades will give a building a cheerful effect, when, if but one of the shades were employed, there would be a dullness and heaviness in the appearance of its exterior. Any one who will follow the principles we have suggested cannot, at least, fail to avoid the gross blunders in taste which most common house painters and their employers have so long been in the habit of committing in the practice of painting country houses.

UVEDALE PRICE justly remarked, that many people have a sort of *callus* over

* Thus, if the colour of the house be that of Portland stone, (a fawn shade,) let the window casings, cornices, etc. be painted a light brown, the colour of our common red free-stone—and make the necessary shade by mixing the requisite quantity of brown with the colour used in the body of the house. There is an excellent specimen of this effect in the exterior of the *Delavan House*, Albany. Very dark green is quite unobjectionable as a colour for the venetian blinds, so much used in our country—as it is quite unobtrusive. Bright green is offensive to the eye, and vulgar and flashy in effect.

their organs of sight, as others over those of hearing; and as the callous hearers feel nothing in music but kettle drums and trombones, so the callous seers can only be moved by strong opposition of black and white, or by fiery reds. There are, we may add, many house painters who appear to be equally benumbed to any delicate sensations in *shades* of colour. They judge of the beauty of colours upon houses as they do in the raw pigment, and we verily believe would be more gratified to paint everything chrome yellow, indigo blue, pure white, vermillion red, and the like, than with the most fitting and delicate mingling of shades to be found under the wide canopy of heaven. Fortunately *fashion*, a more powerful teacher of the multitude than the press or the schools, is now setting in the right direction. A few men of taste and judgment, in city and country, have set the example by casting off all connexion with harsh colours. What a few leaders do at the first, from a nice sense of harmony in colours, the many will do afterwards, when they see the superior beauty of neutral tints, supported and enforced by the example of those who build and inhabit the most attractive and agreeable houses, and we trust, at no very distant time, one may have the pleasure of travelling over our whole country, without meeting with a single habitation of glaring and offensive colour, but every where see something of harmony and beauty.

DESCRIPTION OF TWO NEW AMERICAN PEARS.

BY DR. W. D. BKINKLE, PHILADELPHIA.

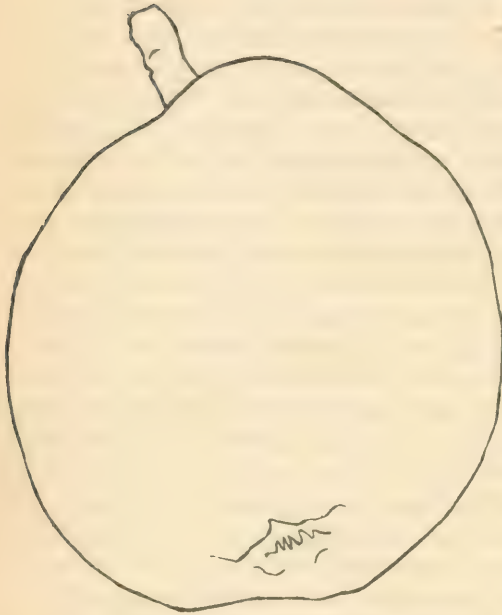


Fig. 111. SMITH'S MOYAMENSING.

THIS fine summer pear originated in the garden of J. B. SMITH, Esq., the well known Philadelphia amateur horticulturist. The original tree is 70 or 80 years old, and has always been a constant and uniform bearer. Mr. SMITH's residence being in the district of Moyamensing, this pear was named Smith's Moyamensing, by the Pennsylvania Horticultural Society, in 1845.

Fruit, of medium size, and in some seasons quite large, of a roundish obovate form, with a fleshy stem, nearly an inch long. *Skin*, of a lemon colour, with occasionally blotches and lines of yellowish russet. *Calyx*, set in a furrowed basin, these furrows sometimes extending some distance up the sides. *Flesh*, buttery, melting, and

well flavored. Ripens from the middle of July till September.

THE HADDINGTON PEAR.

This new winter pear was also raised by J. B. SMITH, Esq., from a seed of the Pound Pear, planted in 1827. It fruited for the first time in 1840. The fruit was exhibited at a meeting of the Pennsylvania Horticultural

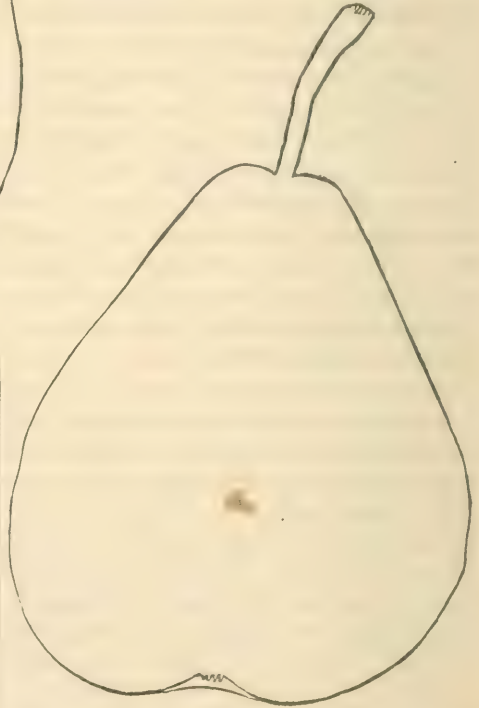


Fig. 112. The Haddington Pear.

Society, in Feb. 1841, and was named by the Society, "Haddington;" it having been grown by Mr. SMITH during his residence at that place, though it now stands in his garden in Moyamensing.

My acquaintance with the merits of this fruit commenced on the 22d of October, 1846. On that day, while passing under the tree, I picked up a prematurely ripe, half decayed fruit, from the ground, and was agreeably surprised at its fine flavor. Mr. SMITH had more than once recommended this pear to my notice; but the unfavorable impression made on me by its parentage prevented an earlier estimate of its value.

The fruit is above medium size, obovate, sometimes pyriform, and regularly sprinkled with small, distinct russety dots: when fully ripe, of a greenish yellow colour, with occasionally a faint brownish check. *Stalk*,

slender, three-fourths to one inch in length, inserted in a small cavity; sometimes there is an elevation on one side of this cavity. *Calyx*, small, in a round shallow basin.

Flesh, of a beautiful golden color, crisp, juicy, with a rich aromatic flavor.

Ripe from January till April.

W. D. B.

Philadelphia, April, 1846.

.....

[We are not only indebted to our esteemed friend for the foregoing description and outlines of these interesting native fruits, not before published, but also for grafts of the same.—Ed.]

A REVIEW OF OPINIONS ON PEAR TREE BLIGHT.

BY L. C. EATON, OF PROVIDENCE, R I.*

ANOTHER theory is that the disease arises from varieties having arrived at or near their natural limits of duration. Dr. DARWIN, in his dissertation on the diseases of plants, describes, under the title canker,* or gangrena vegetabilis, a disease which we should presume to be fire blight. He calls it an ulcer of the bark, and says it is very destructive to apple and pear trees, and recommends that the affected parts should be cut out, and paint laid on the hard wood. He states that "Mr. KNIGHT has remarked that this disease is most apt to attack those fruits which have been long known, and supposes it to be a disease of old age." This seems to be the opinion of COXE, who says, "From repeated observation of the kinds, most liable to this malady, (the fire blight), I have been led to believe that it is

somewhat connected with a principle which appears to be considered sound by the most judicious European writers, when treating of apple trees, that is, the long duration of the variety. It is certain that natural trees, continually springing up from seed, are seldom attacked by this disease; and the Seckel pear, generally supposed to be a new variety, is but little affected by it; of fifty bearing trees of this kind, of various ages, I have not lost one entire tree from this cause. This year, for the first time, I have seen the limbs of some of them partially affected, and in some instances several large branches have been destroyed."

Before any reliance can be placed upon the correctness of this theory, it is necessary to establish the fact that the existence of varieties is limited to a certain period, a question frequently discussed and of much doubt. The disease, however, not only attacks old varieties, but those of more recent

* We presume that the fire blight in Europe is generally called canker. McILROTH, treating of pears, speaks of canker "caused by the wood being imperfectly ripened in bad autumns."

* Concluded from last No.

origin. The *Passe Colmar*, for instance, when young, is particularly subject to it. The *Seckel*, though generally healthy, is sometimes affected by it. We believe, however, that it is more so now, than when COXE wrote, some thirty years since. That this kind was occasionally subject to it, we should suppose, would have led him to entertain doubts as to the correctness of his theory.

An opinion has been advanced, of late, that the disease "is an epidemic, that it prevails like other epidemics, and will pass off like them;" and that infection is transmitted by the air. This opinion is open to the same objections as that which ascribes it to electricity, or any atmospheric influence. •The leaves and extremities of the branches would always first indicate its presence. The whole system of sap wood, through which the juices circulate, would soon become so contaminated, that in no case would a withered limb, or discolored patches of bark upon the trunk or main branches, mark, at any one time, the limits of the "infection," but would show that it had progressed so far, that it would be useless to attempt any remedy. The whole tree would be diseased, as for instance, the peach by the yellows, and not parts of it. If a limb is badly injured by frost, disease may be prevented by cutting it off, but we should as soon think of stopping the small pox by amputation, as the fire blast, if it be an epidemic. If "an epidemic, like the Asiatic cholera," it would equally affect pears of native and those of foreign origin—as well those standing in "close plantations" as those a few feet more distant from each other, upon dry as upon wet soil, and would be as likely to prevail or be as destructive in one locality as another, in Europe as in our own country. If it be an ob-

jection to the frozen sap theory, that it attacks "old instead of young trees," it is also an objection equally applicable to the belief that the "blight is an epidemic." The same difficulty would remain to be accounted for, if the fact be as stated, but it is not so. "Saplings in our nurseries" are cut down, as well as those "which have for many years borne fine crops of pears." Perhaps not as frequently, but still to some extent. "I have noticed," says a careful observer, "this disease to attack pear trees in almost every stage of growth. The time, however, that it appears to be most decisively destructive, is about the period of their approach to the degree of maturity, which promises a remuneration for the anxious and attentive cultivator." Nor is it true, as has been supposed, that the frozen sap theory asserts "that the disease is contracted at the extremities, and is from thence conveyed through the system by the circulation of the fluids," but that the trunk and main branches are first affected, and that the tree may be seriously, if not fatally diseased, when the extremities appear flourishing. Nor does the theory suppose that it arises from severe frosts merely, but by sudden and frequent alternations of heat and cold, operating upon the fluids while in circulation. Whether the injury is sustained in the spring, or in the fall previous to the season during which the disease shows itself, and the manner in which it operates, may be questions of some doubt with those who entertain this belief.

A correspondent of Maryland, to the *American Farmer* in 1821, remarks, "In all the various suggestions as to the cause of this disease, I never heard of one that came near the fact, which is more to be wondered at, as the real cause has been so strongly indexed by notorious facts. Such, for in-

stance, as hard winters, with long cold springs, giving us good pears and leaving us sound trees, while a warm February, followed by a cold March, destroys our trees. We have long been acquainted with this much of vegetable physiology, that the bark forms on its interior surface longitudinal fibres, the same as sap wood, and by this means adheres to the main sap wood, becoming one and inseparable, and that when a certain temperature, say that of April, becomes steady, that those same fibres, having lost their colour, throw out juices and form fibres differently disposed and coloured, or bark. It is a well known fact that the finest kinds of pears are introduced from a milder climate than 39 degrees, and therefore are very sensible to both cold and heat. They are trees that abound with juices, as may be seen by the numerous scions that they fling up around them. If the later part of winter or early spring is warm, these juices are set afloat, especially if the ground is rich and cultivated. In this degree of light and heat, the bark begins to form a separation to take place from the new made sap wood, and in a few days winter; returns upon the tree, or in other words February has been spring and March winter; an imperfect bark is thus separated from the mother white wood and sickens, and, as heat is farther applied, dies. It is sometimes the middle of the summer before the damage is developed." And the writer states the following facts, that he has known only two sets of healthy pear trees, and they were neither manured nor dug round for years; the suckers were permitted to grow undisturbed, and the grass surrounded them unbroken; and that they were not only perfect, but bore fruit when others failed. He had two *healthy pears*, "*the Vergalieu*, the one was choked with grass, and the other so surrounded with sci-

ons as scarcely to admit of approach." He removed the "scions," and dug and manured the ground, and both perished; and he gives another instance within his knowledge, where the same effect was produced by similar treatment. He supposes, in the first instance, "that the abundant juices were restrained," and recommends that the trees, after they have arrived at the fruit bearing period, should be untouched by the knife, and "suffered to vegetate naturally." He also states his belief that the application of any composition, such for instance as white-wash thickened with ashes and cow dung, spread upon the body and larger limbs, instead of being beneficial, "might be the very cause of death," and advises the trial of such experiments as will prevent "the too free and *early* circulation of the sap."

Unimportant as it may seem, whether the disease is produced by the freezing of the sap in the autumn or spring, yet in our apprehension, the writer committed serious errors as to the remedies to be used to guard against it, by simply mistaking the time when the injury is sustained. We have no doubt that the trees he refers to as perishing, which were of a variety by some supposed to have arrived at or near the limits of its duration, were neither attacked by an epidemic, nor by a disease produced by reason of "long continuance," but destroyed in consequence of the means taken to promote their growth. The removal of the grass, "unbroken for years," and of the abundant quantity of suckers, which surrounded them, (to the extent of nearly forty feet,) and the application of manure, occasioned a vigorous late growth that became fatal. "The only severe case of blight in gardens here," says DOWNING, "during the summer of 1844, was in the head of a *Gillogil* pear, a very hardy sort, which had never before suffered. The previous mid-

summer, it had been severely pruned and headed back, which threw it into late growth. The next season, nearly the whole remaining part of the tree died, with the frozen sap blight.* Instead of endeavoring to check early vegetation, those varieties should rather be selected, "which are of early habit, and ripen their wood fully before autumn."

Why is it, if "hard winters with long cold springs give us good pears and leave us sound trees," while a warm winter followed by a cold spring "destroys our trees," that the disease is not more prevalent in England, where it is comparatively unknown? The winter there is much milder, and vegetation earlier, and cold winds and sharp frosts, succeeded by hot sunshine, *often occur in the spring*. The truth is, we believe, that the autumn is not there so warm, nor vegetation so late and vigorous, nor the atmosphere subject to such sudden, severe and frequent changes at that season, as here; and in consequence the trees escape from the injury originating the disease.

A slight protection will guard against cold. In England, netting is successfully used to prevent wall fruit from being injured by spring frosts. Ropes of straw stretched in front of the trees, two feet apart, and from six inches to two feet from the wall, have been found to answer the same purpose. And we have no doubt that the fire blight may be prevented by either coating the trunk and main limbs with a composition, or by binding matting or straw

around them, if done at a seasonable period in the fall.

In *Thacher's Orchardist*, it is stated, under the title canker, that Mr. YATES, of Albany, says "it seems extraordinary that the fruit trees in this climate *are almost invariably affected on the south-west side of the trunk or body*. There it generally commences;" the bark first appearing dark, at length rough, wrinkled, cracked and dead. And it is Yates' opinion that it is caused by cold overtaking the circulation of the sap in the spring. "Fruit trees," he remarks, "generally incline to the north-east. The motion of the sap, which ascends in all vernal months in all deciduous trees, is accelerated by the hot rays of the sun at the south-west. It is retarded and stagnated by the cool of the nights, and by alternate thawing and freezing, particularly at that side of the tree, the vegetation is at last destroyed and mortification ensues." Whether the conclusion arrived at as to the time when the disease is contracted, is questioned, but the circumstance as to the part of the tree more generally injured would strongly indicate its cause; and the inquiry is well worthy being made whether the incident be true or otherwise.

Whatever theory has been advocated as to the origin of the disease, the statement of facts relied upon, the truth of which has been well ascertained, leads to a strong probability of the correctness of the views expressed by DOWNING in his treatise upon *Fruits and Fruit Trees*.* Much weight is added to them by the circumstances related in the extracts there made from an article written by Mr. BEECHER.

* Note.—Trees which have arrived at the fruit bearing period are often seriously injured, and sometimes destroyed by being grafted and subsequently pruned injudiciously. Pear trees are the greatest sufferers. We have known very many to be killed by these means. Only a part of the tree should be grafted at one season; and the strong watery shoots that sprout from the limbs should not be removed till the succeeding year.—[Excellent advice.—Ed.]

* Note.—In *Deane's American Farmer*, there is a highly interesting article upon mildew, principally relating to the distemper in grain called rouille or rust. The investigations of several learned and scientific observers are given. It is ascribed by them to the same or a similar cause to which DOWNING ascribes the fire blight.

Our attention has been for some years directed to this disease, and we would give what testimony our own experience furnishes. We have lost some trees by it, though fortunately not many, as well other fruit as pears. Five years since we set out two rows of Tartarian cherries in a garden, which has for very many years been highly cultivated. The soil is rich, and a part of it so moist as to require draining. The trees made a rapid growth. The second season after they were transplanted several died, presenting the appearance of having perished by the fire blight. This led us to watch them more closely. Early last spring, before a leaf had shown itself, we examined the rows and discovered upon using the knife that the entire inner bark and sap wood of the trunk of one, and part of that of another tree, was dark and much discolored. The limbs and roots appeared sound. Without disclosing the result of our examination, we then, and twice subsequently, after vegetation had commenced, called the attention of the gardener to the rows, requesting to know whether there was any perceptible difference in the appearance of any of the trees. None was observed by him. The two referred to put forth leaves, blossomed, formed fruit, made considerable growth at the extremities, and appeared vigorous. About the first of June, a change took place; the leaves turned yellow, the fruit gradually fell off, the branches withered, and about the middle of the month the trees perished. In each instance of loss, the trees stood where the ground was moist, and were more closely surrounded by other trees. A thrifty pear standing near by now presents the same early symptoms.

Why trees suffer more in moist than dry soil, and in close than open plantations, may be readily accounted for. A moist rich soil promotes a late growth. Close

plantations are usually more highly cultivated. In fruit gardens, rapid growth is desired. When the soil is made rich, there is a disposition to crowd in too large a number of trees, and the ground is overstocked. The trees shade each other, and when covered with foliage, prevent evaporation of moisture and a free circulation of air. The thrifty wood, more succulent and less matured than that of trees in more open situations and less cultivated, is more easily injured by the excessive changes in the atmosphere, which sometimes occur in the autumn months.

One reason, we apprehend, why this disease prevails with the pear more at the West than any other section of the country, is the greater fertility of soil. A poor soil is by no means desirable, but that which is deep and rich promotes an over-luxuriance of growth, and produces wood buds instead of fruit buds, two evils which art must seek to avoid. McINTOSH, in his treatise upon the Orchard, remarks that ROGERS assigns for a reason why the quince stock has become so popular, (in England,) is, "the bad success attending the ordinary method of planting pears worked on seedling stocks in too deep and rich borders, which causes such exuberant growth and consequent barrenness, that the trees were only useless encumberers of the ground. Had the borders been properly prepared by having a hard dry bottom, with a surface layer of light fresh loam, about fifteen inches deep only, the same trees would have taken a kindly growth, and very soon would have been fruitful." He observes that the opinion of SANDERS, nurseryman, of Jersey, given in the *Gardener's Magazine*, is much to the same effect. "Free stocks are very preferable where the soil is high and dry." McIntosh remarks that "from eighteen inches to two feet and a half of soil is quite suf-

ficient, and the roots should be prevented from extending to greater depth by forming artificial floors, or placing broad flag stones under them;" and he recommends pruning the roots—which he says "is an old practice that does not appear to have been so generally attended to as it deserves," not only to check too vigorous growth and produce fruitfulness, but to prevent disease.

From these and similar statements we are led to believe that the disease may be avoided in some localities by selecting pears worked on quince instead of free stocks, and that root pruning, systematically fol-

lowed out, would be found highly beneficial where the soil is very fertile and the growth is excessively luxuriant.

In propagating this fruit, no one should utter complaint or be discouraged, though its enemy is at times so destructive, so little has as yet been done to guard against its attacks. Let every experiment, which promises a reasonable hope of success, be faithfully tried, and we doubt not, though entire protection may not be the result, that loss will be rendered much less frequent, and comparatively of little consequence.

L. C. E.

GRAFTING, PLANTING AND PRUNING OF DWARF PEAR TREES.

By SAM'L. G. PERKINS, Esq., BOSTON.

REGARDING the cultivation of pears on quince stocks, I may remark in the outset, that the soft-fleshed or buttery pears are those that are best suited to the quince bottoms, the breaking or hard flesh being better suited to the pear or free stock.

In our climate, (New-England,) the springs are too harsh, and the true summer period generally too short to ripen pears, and some other fruits, sufficiently for autumn and winter use. The warmest and most sheltered positions, therefore, in your garden, should be selected for your winter pears, particularly for the *Easter Beurre*, *Chau-montel*, *Winter Nelis*, *Glout Morceau*, *St. Germain*, *Passe Colmar*, and *Napoleon*.

If you receive your young rooted cuttings or layers of quince in the spring, it may be well to graft them BEFORE you plant them, if you have a convenient place under cover, where the operation can be performed, by a single person, on several hundred in a day. The scions should be put within two or three inches of the collar where the up-

per roots start out so as to enable you to bury the wounded portion of the graft below the ground. This is usually preferable to grafting them AFTER they are planted, as it may be both easier and more correctly done, as well as much more quickly performed. I have frequently grafted young pear stocks in this manner, and found them to succeed perfectly. When these trees have attained a proper size, in the nursery, to be planted out where they are to remain to produce fruit, be careful to have them placed on the *highest* ground, and not in *hollows*, where the water can lodge.

Some cultivators think it best to dig large *holes* under the spot where the trees are to be set, filled with rich soil, but I think this is a mistake; for, if there be any evil arising from the roots being confined within a hole surrounded by a hard pan, which will keep the water from passing off, the evil is not avoided by putting the tree over and above the hole; for if the soil in this cavity be richer than that which is above its borders,

most, if not all, of its roots will be drawn into this enticing and exciting food, and all the evils of luxuriant or *glutton* branches, as well as those of heated and decayed roots, arising from stagnant and putrid deposits of water that has no outlet, must be expected.

We think that the best mode, both in gardens and orchards where fruit trees are to be planted, (unless they already lie on *sloping* ground,) is to plant them on the *top of ridges*, made at proper distances, and just high enough to carry off the water gradually after it has passed over the roots of the trees; but I should not allow any depression of the soil under the tree, where the water could lodge for any time. Neither should I allow any manure or extra rich soil to be deposited in the neighborhood of the roots. If your trees become weak, a pure, good, virgin soil applied in the fall or spring by partially uncovering their roots, is the best remedy you can give them. The soil of the nursery should not be as rich as that of your garden, into which your trees, when large enough, are to be transplanted; because the change from very rich to poor soil has a tendency to check their growth, and is an essential injury to them.

When young trees are planted out into the nursery, or elsewhere, the tap roots, if they have any, should be cut out close to the stem; the lateral roots should be spread horizontally, (a little depressed,) so as not to interfere by crossing each other; and the upper roots should be covered about two or three inches deep over the upper part of them, at their insertion.

In preparing the places where the trees are to be planted out permanently, it is best to throw the earth out into *one* pile, several days before they are planted; this will sep-

arate the lumps and stones from the fine earth, which you will want to fill up among the roots; every part of which should be brought into contact and entirely covered with the earth, as any parts of the roots left exposed to the air are apt to mould and decay.

As your trees develop their branches you will see whether they are best suited to be pruned to make *Espaliers* or *Standards*, and will treat them accordingly.

In doing this, if you wish for trees to fill out your trellises, and any of the trees destined for this purpose should want a branch or two to make them uniform, they can be easily supplied by inarching from the same tree, a limb already perfect, into the side of the trees where the deficiency exists, and, when it has taken hold securely, cut it off close to the grafted part, and you will fill up all vacancies, although you will shorten and disfigure, in some measure, the branch or branches applied to this object. But the branches so cut and disfigured, will soon be restored to form and order by care of the gardener. This is a much surer and more advantageous mode of obtaining your object than that of inserting *buds* or *grafts* in the naked places, because the branch thus inserted may be a *fruit-bearing branch* in lieu of a wood bud or scion that will not bear fruit for several years.

When the *Standard* trees have attained in the nursery sufficient growth to be removed into the garden, those that have their stems well furnished all around with branches from bottom to top, that is to say, from a foot or nine inches from the ground to within the same distance of the top, may be treated and pruned as *pyramids* or *conical standards*. This form, when properly pruned, will give the greatest quantity and best quality of fruit.



Fig. 113. Conical Dwarf Pear Tree.

This form is produced by carefully pruning the branches so as to diminish gradually from the lowest that surround the tree at its base, up to those that form the uppermost tier at the top of the tree, so that when the tree has attained its utmost height, say 8 or 10 feet, according to the fancy of its owner, it will resemble a truncated cone, by taking out the leading shoot down to the upper row of branches.

This is to be brought about by degrees, as the tree advances in its growth, pruning

the lowest branches to a length not exceeding $4\frac{1}{2}$ feet on trees ten feet high, and 4 feet on those that are only 8 feet high, when the form of the tree is perfected, and diminishing the length of each successive tier of branches from about four to six inches in length, according to the distance that exists between their stages. When your tree has attained the requisite height of eight or ten feet, to the upper tier of branches, you cut out the *leading shoot* (a) close to their insertion, as before mentioned.*

While this operation of regulating the length of the branches is going on, great care must be taken to prune the side shoots on each circle of branches, so as to produce *Fruit Spurs*, or what the French call *Bouquets*.

If the trees, when taken from the nursery, are not well furnished with branches all around the stem, or have them only towards the upper part of it, then it will be best to prune them in the usual way for *headed Standards*.

Respectfully yours,

SAML. G. PERKINS.

Brookline, near Boston, March 18, 1847.

* Fig. 113 represents a dwarf pear trained in the *conical* form—perhaps the very best, as our correspondent observes, for the production of a large quantity of fruit in a small space.

We will add to Mr. PERKINS' judicious suggestions that, perhaps, the best way to grow trees in this form, when suitably branched ones cannot be obtained from the nursery, is to choose a tree of but *one year's growth* from the graft. Two or three years' old trees are usually bare of branches at the lower part of their stems. Shorten back the single or leading shoot of this young tree to within one foot or 18 inches of the ground at the time of planting it. This will develop the lower branches; to encourage the growth of which still more, it is well to shorten back the leading shoot, about the first of July. This will, about the middle of the growth the next spring, cause to start out another tier of branches a foot above the last. The next summer, in July, the leader is again cut back to within a foot of the last tier, which will cause the growth of a third set. and this must be repeated every year till the tree is from 6 to 10 feet high, as the taste of the cultivator may dictate. *Pinching off*, in summer, the ends of such side-shoots that are inclined to grow too long, is considered a better mode than pruning them.—Ed



THE ESPALIER WALK IN THE FRUIT GARDEN AT WODENETHE.

THE RESIDENCE OF H. W. SARGENT, ESQ.

[Horticulturist, May 1847.]

THE FRUIT GARDEN AT WODENETHE,

THE RESIDENCE OF H. W. SARGENT, ESQ., DUTCHESS CO., N. Y.

OUR friend Mr. BEECHER, in his capital journal, published at Indianapolis, spoke, some time ago, with a good deal of emphasis, and a good deal of regret, of our "amiable fondness for the localities of the Hudson river." He thinks we have underrated the flavor of western fruits, and given rank to Eastern New-York at the expense of other fruit-growing regions. After this lamentation over our bias, Mr. BEECHER concludes, very naturally, by saying that "the western States, say Ohio, Indiana, Kentucky, and portions of Illinois, are, the whole range of the orchard being considered, better fruit-growing States than New-York or New-England." 'Tis always thus; both his and our readers will say,

"The patriots' boast where'er we roam,
His first, best country, ever is at home."

We have at times fancied that one might be unprejudiced, and that one could do justice on the one hand to the high culture of Boston, and on the other to the great natural fertility of the west. But alas! we have said that "the apples, raised on the very *fertile bottoms* of the western States," are inferior in flavor to those grown on the best orchard soils of this section of the country!

We have some doubts, after this rank offence, (for we did *not* say that there were not many orchards on proper soils, in the west, that give finely flavored apples)—we say after this offence, we are a little fearful that Mr. BEECHER will take it into his head that New-York is not a fruit-growing State at all, and that the "localities of the Hudson" are only barren boundaries to a considerable stream of water. He will forget the Pelham farm orchard,

the largest in the world, with 200 acres of Newtown pippins, that supplies all London market; and Dr. UNDERHILL's vineyard, not excelled in America, that supplies all New-York; he will forget the famous plum gardens of Hudson and Albany where the curculio is unknown; he will not remember that the *Esopus Spitzenbergh* and the *Swaar*, the highest flavored apples,—and the *Jefferson*, and the *Columbia*, the largest and best yellow and purple plums, that the *George the IV*, the best American peach known; all originated in the valley of the Hudson. Yes, we have unluckily said that the west, that magnificently fertile country, which by its fertility, is at this moment helping to feed the world, *has* many "fertile bottoms," and that those fertile bottoms give "very large and beautiful," but not the highest flavored apples.

Some western editor, who has become a little "riled" at any supposed attack upon the character of western apples, has boldly proposed to settle the matter by showing specimens with any eastern orchardists. But we solemnly advise our orchardists to decline the challenge. There would be no chance for them. There is not one fruit committee in America in an hundred, that would not, in a moment, sacrifice *flavor* to *size*. Their "mavellousness" is a great deal larger than their "alimentiveness," as the phrenologists say; and unless we could cleverly contrive to inarch pumpkin vines on the branches of our apple trees, (as the French gardeners do tomatoes on potato hills) the "fertile bottoms" would outweigh, outmeasure, and outdo us!

Seriously, as we think all cultivators,

whether east or west, are interested in accounts of good cultivation of fruit, we must beg them to pardon us while we give them a peep into the fruit-garden of our neighbor, HENRY WINTHROP SARGENT, Esq. (see *Frontispiece*.) His residence is in Dutchess county, on the east bank of the Hudson, nearly opposite us, and 60 miles from New-York. Of the grounds, in an ornamental point of view, we may, perhaps, speak hereafter. At the present moment, we have only sufficient space for one portion of his place—the Fruit-Garden.

The fruit-garden at WODENETHE is a parallelogram, containing about two acres. It has been the aim of MR. SARGENT, who is a truly zealous amateur, to assemble in it a collection composed of every *very choice* variety of fruit known, and to reject all that were either known, or believed to be second rate. The selection has been made with the greatest care, from the best American and European sources, and it undoubtedly may be considered as the choicest and most complete private fruit-garden on the Hudson, and one of the best in the Union. Many of the trees were in fine bearing last season, and the largest part of them will probably give good crops this year.

			Varieties.
Of the choicest pears the garden contains			106
do	peaches	"	60
do	plums	"	56
do	nectarines	"	14
do	apricots	"	12
do	native grapes	"	11
do	cherries	"	20
do	quinces	"	3
do	raspberries	"	6
do	currants	"	4
do	strawberries	"	14
do	gooseberries	"	*12

* *Apples* in another part of the grounds.

Besides these, there is a *Vinery*, 120 feet long, 20 feet wide and 13 feet high—a very light and handsome glazed structure, with a *curvilinear*, span roof. This house contains 85 vines, of the finest foreign grapes, in 31 varieties—as well as figs, apricots and nectarines.

Our FRONTISPIECE gives a glimpse of this *Vinery*, at the termination of the main walk of the fruit-garden. This walk is 428 feet long, and is bordered with an espalier rail, upon which many of the choicest peaches, grapes, plums, etc., are trained—not from necessity or for greater protection, as in gardens farther north, for all those fruits ripen perfectly on common standards here, but to give an illustration of this more perfect kind of culture, and to obtain fruit of a larger size and higher color than standards usually produce.

The soil of this garden is a gravelly loam, and it was thoroughly trenched, 3 feet deep, before the trees were planted. The advantages of this are apparent at a glance, in the healthy appearance of the trees, and the steady and uniform growth which they have made, ever since they were planted—even during the great drouth of 1844.

Among the rare pears, we noticed *Colmar d'Aremberg*, *Duchesse d'Orléans*, *Beurré Moiré*, *Broom Park*, *Soldat Laboureur*, and others of the latest celebrity in the collections of France and England.

The *Columbia* plum has borne very superb fruit at WODENETHE. We saw specimens there, last September, which measured *six inches* in circumference. *Royal Hâtive*, *Large Green Drying*, *Jefferson*, and many other fine sorts are showing fruit buds the present season. Amongst the native grapes are the *Ohio*, *Norton's Seedling*, *Diana*, *Shurtleff's Seedling*, etc.

It would be difficult to say which, of all

the different classes of fruit thrives best here, for the soil and climate are adapted, in an unusual degree, to all hardy fruits. It is one of the fortunate circumstances of this part of the Hudson, for which we indulge our "amiable fondness," that plums, apricots, and nectarines,—smooth skinned fruits, which are by no means produced with equal ease in all parts of the country,—succeed most perfectly here. There is a farmer, about two miles from WODENETHE, who has sold, of his own produce, nearly \$2000 worth of plums in a season, and the gardens here abound with the finest gages.* Peaches are highly flavored, and so com-

plete is the protection afforded by the steady temperature of the river against sudden changes, that we do not remember but a single year, when the crop of this fine fruit was destroyed by frosts. It is in this respect that we may fairly claim for a portion of the banks of the Hudson, as well as those fine districts bordering on the great lakes of this State and Ohio, a climate very unusually adapted to the growth of the finest fruits.

But we must forbear, or we shall receive a broadside from the west, which will disturb our *otium cum dignitate*, (or, as a witty gardening friend will have it, "*opium cum digitalis*,") for an indefinite length of time.

REMARKS ON THE SCIENCE OF GARDENING.—No. I.

BY DR. WM. W. VALK, FLUSHING, N. Y.

WE are inclined to think the subject an interesting one, and as fully calculated to lead to great improvements in the whole system of culture, as at present understood and practiced by the best horticulturists, either at home or abroad.

For many years, gardening, as well as agriculture, has been conducted upon very loose principles, and both are as yet but in their infancy. Every thing was, (and in most cases is,) routine; an overseer orders, and his juniors or laborers obey; no one gives a *reason*, and thus are *effects* produced without any inquiry into *causes*. These facts, which all acknowledge, and many lament, indicate, beyond all doubt, that seminaries or institutions are required wherein every element of the art should be strictly investigated by competent persons, and the results be taught to the pupils of the estab-

lishment, who should go through a regular course of experimental inquiry in all its departments.

For *agriculture*, something has been done. A state of torpid ignorance no longer exists; and seminaries or schools of investigation, have been suggested, and steps taken to establish them. In France and Germany vast improvements have been effected, as may be seen by a reference to "*Bache's Report on Education in Europe*," for a description of "The Institute of Agriculture and Forestry, at Hohenheim, near Stuttgart," described and reputed to be the most complete agricultural school in Europe. In the U. States a beginning has been made in furtherance of scientific agriculture, by MR. WILKINSON, who has advertised for pupils, and made arrangements for giving them instruction in all the details of theoretical and practical farming.

But not a single instance can be discovered of the establishment of a *Horticultu.*

* An acquaintance of ours, about two miles south of Newburgh, gathered last season 8 bushels of the finest *Etruge* nectarines from four standard trees, grown with little or no care.

ral school, wherein the science of gardening is even alluded to. In 1818, the *Jardin des Plantes* at Paris, consisted of the open-air departments devoted to the purposes of teaching; wherein there was an indifferent collection of hardy herbaceous plants, trees, and shrubs, with some puerile contrivances to aid the student of agriculture: the plants in the houses (such as they were) were badly cultivated, few in number for such a place, and unworthy the reputation the garden had acquired. Subsequently, many other houses were erected, and the establishment was considered "progressing to a better state."

In England, the Royal Gardens at Kew may be mentioned, wherein of late years, from the liberal management introduced under the able direction of Sir WM. HOOKER, the collection of plants has become as accessible as could be desired.

The London Horticultural Society, the Botanic Gardens at Edinburgh, Liverpool, Cambridge, Oxford, Birmingham, Leeds, Manchester, &c., all have their merits—all diffuse a knowledge of existing plants; but they are not seminaries where a scientific education can be obtained. Then as to all other horticultural societies, there is no difficulty in determining how far they exert an influence favorable to the science of gardening—they stimulate emulation, rivalry, the growth of fine specimens, and anxiety to win a medal or a pecuniary prize; *but what do they teach?* The question is significant, and must be submitted to reflection.

What we desire to see, is some decidedly comprehensive undertaking, wherein every material, every thing that can be rendered available to the instruction of youth devoted to the profession, shall be collected, and maintained, either directly by the government or by the united efforts of zealous and affluent individuals, constituting themselves

an influential body, (chartered of course,) and subscribing to funds to purchase a large breadth of land, whereon all the operations of horticulture shall be performed by the students in the open-air departments, and in every variety of glazed or defensive erections, under the supervision of directors qualified to undertake, note down, and record every observable fact and traceable cause. This system would imply courses of lectures on soils, water, moisture, vapor, fermentation, gases; their extrication, mutual attraction, combination, and results; air, light, heat, electricity, galvanism, magnetism. All these, constituting as they do the class of great natural agents, are employed by nature, and in full activity. In its most comprehensive sense, botany would form a very important feature; so would the natural history, climate, introduction of every known plant, and the best method of culture, subject to discovery and improvement. We only suggest, but that any *efficient* steps will be taken, we hardly dare to hope: in the mean time it may not be unprofitable to allude, to a greater or less extent, to each of the subjects mentioned—not with any expectation of doing it justice, or of being able to elucidate satisfactorily the phenomena which, at present, we can only contemplate, yet inquiry and admiration may be thus excited, attention may be roused, and others may be stimulated to do that more effectually, which is herein only attempted.

Thus far an imperfect prospectus only has been ventured on, introductory to a series of short articles which will follow in succession as far as time will permit. General gardening, although mentioned at the commencement, can not be noticed so far as vegetables are concerned. The subject is one which differs widely from science, and stands alone; but as the flower-garden,

parterre, shrubberies, and lawn, are each and all dependent upon *soil*, *water*, and *air*, these great agents must be alluded to; and therefore the investigation of earth will include the operation of manures. To this extent then, the staple of the garden will be submitted to analysis; for unless these subjects be inquired into, no means of comparison of facts can be attained.

Thus much in explanation; it is hoped that our future articles will neither appear irrelevant nor prove uninteresting. The

reader will bear in mind, that for his benefit we place before him that which he would perhaps never see but for our instrumentality. Some of the excellent ideas on this subject, with which English horticulture has been enriched by Mr. PAXTON—the manager of the DUKE OF DEVONSHIRE'S immense horticultural establishment, must be made to penetrate our atmosphere, and illumine our understandings upon the *science* of gardening. WM. W. VALK, M. D.

Flushing, L. I. April 7, 1847.

THE CHINESE MAGNOLIAS.

NATURE has bestowed that superb genus of trees, the *Magnolia*, on the eastern sides of the two great continents—North America and Asia. The United States gives us eight of all the known species, and China and Japan four or five. Neither Europe, Africa nor South America afford a single indigenous species of *Magnolia*.

All the Chinese *Magnolias*, excepting one, (*M. fuscata*), are hardy in this latitude, and are certainly among the most striking and ornamental objects in our pleasure grounds and shrubberies in the spring. Indeed, during the month of April, and the early part of May, two of them, the White, or *Conspicua*, and Soulange's Purple, or *Soulangiana*, eclipse every other floral object, whether tree or shrub, that the garden contains. Their numerous branches, thickly studded with large flowers, most classically shaped, with thick kid-like petals, and rich spicy odor, wear an aspect of great novelty and beauty among the smaller blossoms of the more common trees and shrubs that blossom at that early time, and really fill the beholder with delight.

The Chinese White *Magnolia* (*M. Conspi-*

cua), is, in the effect of its blossoms, the most charming of all *Magnolias*. The flowers, in color a pure creamy white, are produced in such abundance, that the tree, when pretty large, may be seen a great distance. The Chinese name, GULAN, literally *lily-tree*, is an apt and expressive one, as the blossoms are not much unlike those of the white lily in size and shape, when fully expanded. Among the Chinese poets, they are considered the emblem of candor and beauty.

The engraving (fig. 114) is a very correct portrait of a fine specimen of this tree, standing on the lawn in front of our house, as it appears now, April 25th. Its usual period of blooming here is from the 5th to the 15th of this month. Last year there were *three thousand blossoms* open upon it at once. The tree has been planted about 14 years, and is now 20 feet high. The branches spread over a space of fifteen feet in diameter, and the stem, near the ground, is 8 inches in diameter. Its growth is highly symmetrical. For the last ten years it has never, in a single season, failed to produce a fine display of blossoms, which are



Fig. 114. Portrait of the Chinese White Magnolia in Mr. Downing's grounds.

usually followed by a few seeds. Last year, however, it gave us quite a crop of large and fine seeds from which we hope to raise many plants.*

This tree is perfectly hardy in this latitude, and we have never known one of its flower buds, (which are quite large in autumn,) or an inch of its wood, to be killed by the most severe winter. It is, however, grafted about a foot from the ground, on a stock of our Western Magnolia—sometimes called in Ohio the "Cucumber tree," (*M. acuminata*.) This perhaps renders it a little more hardy, and rather more vigorous than when grown on its own root—as this

native sort is the very best stock for all the Chinese sorts. It is so propagated by budding in August; and no doubt the *spring budding* recommended by Mr. NELSON in this number, would be a highly successful mode.

The next most ornamental Chinese Magnolia, is Soulange's Purple, (*Magnolia Soulangeana*.) This is a hybrid seedling raised by the late Chevalier Soulange Bodin, the distinguished French horticulturist. The habit of the tree is closely similar to that of the *Conspicua*; its blossoms, equally numerous, are rather larger, but the outside of the petals is finely tinged with purple. It partakes of the character of both its parents—having the growth of *Magnolia conspicua*

* There is, we learn, a fine large specimen of this tree in the garden of Mr. William Davidson, Brooklyn, N. Y.

and the colour of *M. purpurea*, (or indeed a lighter shade of purple.) Its term of blooming is also mid-way between that of these two species, being about a week later than that of the white or *Gulan* Magnolia. It is also perfectly hardy in this latitude. The Purple Chinese Magnolia (*M. purpurea*,) is a much dwarfer tree than the two preceding species. Indeed, it is properly a shrub, some six to eight feet in its growth in this latitude. Grafted on the "cucumber tree," it would no doubt be more vigorous, and perhaps more hardy, for it is occasionally liable to have the ends of its branches slightly injured by severe winters here. Its flowers begin to open early in May, and on an old plant they continue blooming for six weeks, and indeed in a shaded situation, often for a considerable part of the summer. These blossoms are white within, of a fine dark lilac or purple on the outside, and quite fragrant like the others. This is the oldest Chinese Magnolia known here, having been brought from China to Europe in 1790—and it is now quite frequently seen in our gardens.

There is another species, (*M. gracilis*,) the Slender-growing Magnolia, which very nearly resembles the Purple Flowering Magnolia—and indeed only differs from it in its more slender growth, and narrower leaves and petals.

If these noble flowering trees have a defect, it is one which is inseparable from the early period at which they bloom, viz., that of having few or no leaves when the blossoms are in their full perfection. To remedy this, a very obvious mode is to plant them with *evergreen* trees, so that the latter may form a dark green back ground for the large and beautiful masses of Magnolia flowers. The American Arbor Vitæ, and Hemlock, seem to us best fitted for this purpose. To those of our readers who do not already possess the Chinese Magnolia, and more especially the two first named sorts, it is impossible to recommend two trees, that may now be had at most of our large nurseries, which are in every respect so ornamental in their symmetrical growth, rich blossoms and fine summer foliage, as the Chinese Magnolias.

NOTES ON THE VALLEY OF LAKE CHAMPLAIN.

BY CHAUNCEY GOODRICH, BURLINGTON, VT.

LAKE Champlain extends from Whitehall (Skeensborough of olden time,) lat. 43° 23', to St. Johns, in Canada, lat. 45° 18'. Its elevation is about 100 feet above tide water, and its width, for about 50 miles from its southern and northern extremities, averages about two miles, and its central part about five miles. Its greatest width is opposite Burlington, Vt., where it is nearly ten miles. It is less liable to storms than any other of the American lakes, and its navigation is so safe that marine insurance

is unknown on its waters. Its basin may average, south about 20 miles, east about 50 miles, and west about 40 miles; bounded east by the Green mountain chain dividing its waters from the river Connecticut, and west by the Adirondack chain of mountains, dividing it from the rivers Hudson and St. Lawrence. On the east side, a rolling surface extends about 20 miles to the base of the mountain range, until it enters Canada, lat. 45°. On the west side, the surface is very broken. There are some fine farming

towns on its banks, while in many places, the mountain range extends quite to its shores, presenting a varied and picturesque appearance, for one-half its length, when it ceases, and the land between the lake and river St. Lawrence is level—and to the outlet of Lake Ontario, rolling.

The prevailing rock on the east side is black slate, sand and limestone. On the west side, gneiss and other primary rocks, hypersthene, sand and limestone, while in many places the immense mountains and beds of iron ore (compared with which the iron mountains in Missouri are insignificant) extend quite to its shores, and great quantities of black or iron sand are thrown on its beach, which is collected in casks and sent to New-York in quantities to supply all demands for it.

This valley contains every variety of soil, from stiff clay to a sandy plain. On the eastern or Vermont side, to the base of the mountain range, a gravelly or clayey loam predominates. There is some sandy and some clayey portions—with a large amount of intervale or bottom lands. Springs and small streams are very abundant, and for agricultural purposes it is the best tract of land, of like extent, in N. England. On the west side, where unbroken, the soil is much like the east, but the streams are generally rapid, with steep banks, while there are some exceptions, and a few valuable tracts of intervale or bottom lands.

CLIMATE.—The average mean temperature, for the last nine years, has been for

January, .. 20° 4'	July,..... 69° 2'
February, .. 20° 2'	August,... 69°
March, ... 30° 3'	September, 60° 1'
April, 44° 4'	October, .. 47° 2'
May, 54° 7'	November, .. 35° 2'
June, 64° 9'	December, .. 22° 8'

44° 10'

Greatest heat, July, 1844, and August,

1845 and 1846..... 96°

Greatest cold, January 28, 1844,—24°

Greatest range..... 120°

Average annual range, 110°

The thermometer rarely falls to —20°; —12° was the lowest, in the winters of 1845 and 1846, and —14° the past winter. The lake opposite Burlington is sometimes open during the winter, but is usually closed about the last week in January, or first week in February, and the time of opening averages about 10th April.

RAIN AND SNOW.—Average quantity of rain for the last nine years :

	Inches.		Inches.
January, ...	1.81	July... ..	4.30
February, ..	1.71	August,	2.15
March,.....	2.21	September,..	3.21
April,.....	2.12	October,79
May, 2.96		November, ..	2.49
June, 3.63		December, ..	2.19

Average, 29.57

Least quantity of rain, 27.58 inches—1844.

Greatest quantity of rain, 37.28 inches—1840.

The average quantity of snow has been 72 inches. The time for "good sleighing" averages about two months. In the winter of 1845 and 1846, snow came on the first day of December and remained for so long as to give us uninterrupted sleighing 103 days, unknown before to that respectable old gentleman, the "oldest inhabitant."

Average time of appearing of robins, March 22.

" " " sparrows, " 25.

" " " swallows. April 27.

Average time of currants in full bloom, May 7.

" " plum and cherry " 14.

" " apple " " 22.

For the foregoing extracts from tables, I

* [We find, on examining our record of the progress of the spring for the last ten years, that in Newburgh the average time of the blossoming of currants is April 14.

" " cherry and plum, " 20.

" " apple " 28.

which makes the opening of the season nearly a month earlier here than at Burlington.—Ed.]

am indebted to the Rev. Z. THOMPSON, whose Natural, Civil and Statistical History of the State justly places him at the head of STATE historians. The observations were made at his residence, one mile from, and 256 feet above the lake, near the University of Vermont, at Burlington.

We plant seeds in hot beds from 1st to 10th April; peas, onions, beets, &c. from 20th April to 1st May; melons, cucumbers, &c., in boxes covered with glass, at same time; annual flower seeds 10th to 20th May; winter vegetables generally 20th May to 1st June. Early peas are picked about 20th June; green corn the last week in July; French reinette or early harvest apples commence ripening 1st August.

By this it may be seen that our climate is more uniform, and not as cold as most places in the same latitude. I have no means at hand for making a comparison with Albany, but think the range of the thermometer is there greater, and that more snow falls in Albany than in this valley. We rarely suffer from spring frosts, and but once in more than 20 years (May 15, 1834) have currants been injured by it. Severe drouth is never known, and in the northern part of the valley, after passing the Adirondack chain of mountains, the farmer is sure of good crops of grass with little or no injury from dry weather.

All the native grapes of New-England flourish—require no protection in winter, and ripen well. The Isabella and White Sweet-water grapes require slight protection, but generally ripen. The Catawba requires no protection, but seldom ripens well without the aid of glass. Antwerp raspberries require no protection, and the shoots are never “winter-killed.” Good peaches are sometimes grown, but they are too uncertain to be worth cultivating, except on walls. Little attention has been given to

quinces: some are now growing with fair prospect of success. Cherries and plums grow in great perfection; our only enemies to them are the curculio, birds and boys. Most of the first settlers planted seedling pear trees, about 60 years since, which are uniformly vigorous and healthy, and some valuable varieties have been produced. New varieties from abroad have not been sufficiently tested to speak of them, except in general terms. The *White Doyenné* (St. Michaels,) *Seckel*, *Dearborn's Seedling*, *Bartlett*, *St. Germain*, and many others grow in great perfection, and most others in course of cultivation promise well.

In no part of the world are better apples produced, than in this valley. They are greatly superior to those grown near the sea-coast, for high flavor and tenderness. Bostonians, resident here, give them a decided preference to any grown in that vicinity, and when a Bostonian acknowledges any thing *equal* to what he finds in the “City of Notions,” it is greater praise than for a genuine John Bull to acknowledge any thing good out of Old England.

Most of the old varieties cultivated in New-England, and many others, are common here; also, many valuable native sorts. That *coquettish* apple, the *Newtown Pippin*, in some situations grows well, good size, fair and perfect, while in others it is spotted and inferior. As a whole it is not as profitable for general cultivation as apples that are natives of New-England, Canada or Europe.

No part of the United States has a more healthy climate. At the University of Vermont, at Burlington, there has been but one death among the students since I have been a resident of Burlington, (20 years,) and that of a contagious disease, in the spring of 1842. The average number of students is 100.

The extreme remoteness and supposed rusticity of our mountain State, has passed into a proverb among story-writers, and when the most uncouth specimen of humanity their imaginations can draw, is described, he is always represented as from Vermont, or, to use a stereotyped phrase in Boston and New-York police reports, "a greenhorn from Vermont;" and a few years since I was asked by a pious old lady in Hartford, Ct., "are the people in Vermont much civilized yet?" her object being to ascertain if missionaries could be safely sent among us. But, on the shores of Lake Champlain, with our daily and nightly lines of steam-boats, connecting New-York

and Europe with Queen Victoria's provinces, our steam, ferry and tow-boats, our 200 sloops, lake and canal boats, connected with the river Hudson by a canal, with the St. Lawrence by a canal and railroad—two railroads in progress for Boston, one for Saratoga, one for Ogdensburgh, connecting us with Lake Ontario, and a fifth for New-York; we think we shall soon, by increased intercourse with our more "civilized" neighbors, be enabled to exchange a few of our "greenhorns," and no longer be "out of the world," though we may be "in Vermont."

CHAUNCEY GOODRICH.

Burlington, Vt. April, 1847.

A VISIT TO THE GREEN-HOUSE OF MARSHALL P. WILDER, ESQ.,

PRESIDENT OF THE MASS. HORTICULTURAL SOCIETY, HAWTHORN GROVE, DORCHESTER.

BY JOSEPH BRECK, BOSTON.

THERE is not, perhaps, another person in the country, who has a greater passion for rare and beautiful plants, or who has done more for horticulture than Mr. WILDER, certainly not in New England. There is scarcely a tree or plant of any description, that is reputed to have any claim to beauty or usefulness, which has been heard of as existing in any part of Europe or America, but it is sure to find its way into this gentleman's collection, cost what it may. It has always afforded us much pleasure to visit this green-house, for something new and rare is always displayed, and then there are many new things, just imported, in various stages of progress, giving the pleasing anticipation of successive exhibitions of something interesting and magnificent. It sometimes seems as if Madame Flora would soon outdo herself, or be eclipsed by her own pro-

ductions, so fast are improved varieties multiplied. What is considered the *ne plus ultra* one year, is perhaps discarded, or thrown completely into the shade, the next season, by a new and superior rival. It is really amusing to look back a few years, and call to mind the varieties that, in their day, have been the theme of admiration, and upon which were bestowed the most superlative terms, but are now neglected and forgotten. The present visit was designed principally for the purpose of examining the splendid collection of *Camellias* and *Azaleas*, now in full bloom, and at the same time to look at other curiosities.

The green-house is divided into three apartments. As the visitor enters into the first division of the house, his eye rests upon a superb collection of Chinese Azaleas, finely grouped upon the stage so as to show

to great advantage the numerous varieties, with their rich tints of orange, scarlet, pink, purple, violet and pure white. The plants are large, well grown, and profusely covered with bloom. The varieties which particularly attracted our attention, were *A. speciosa*, *rosea*, *superba*, *violacea*, *neriflora*, *aurantia superba*, "the finest orange scarlet, the pride of the Frankfort Seedling," a very beautiful variety; *Copeii*, &c. Additions have recently been made to the collection, by an importation from Germany, via England, which were received in good order. Some of them are now showing bloom; of these, we noticed *Azalea exquisita*, resembling *A. variegata*, but larger and a more profuse bloomer; *A. optima*, "dark scarlet, the best of this colour;" *A. Prince Albert*, scarlet, and *A. alba insignis*, "the largest and best formed white."

In this apartment we noticed several varieties of the new *Tree Pæonies*, of which Mr. W. gave the description from his invoice, viz: *Elizabetha*, described as "dark carmine, 9 inches in diameter, full and of regular form;" *Van Houtii*, "of a darker colour than the former;" *Karl V*, "large white, very double and round;" *Rococco*, "dark purple, full and fine form;" *Triomphe de Malines*, "of a beautiful amaranth colour, shaded with rose, of the most perfect form, an enormous, large, high formed flower." If these varieties equal the description, they must even surpass the magnificent flowers exhibited by Mr. W. at the Society's rooms, in the summer of 1845, embracing 15 varieties, and over 100 blooms. In this room, there was a great number of *Gladioli*, including an invoice of 59 varieties. As we enter the second apartment, we have an extended and brilliant view of this unrivalled collection of *Camellias*, consisting of more than 2000 plants, the back range of which is principally composed of

very large plants of the *Double White*, some of them 10 to 12 feet high. One of the most striking varieties is *Donkelaarii*, with large semi-double scarlet crimson flowers, spotted with white; *Duchesse d'Orleans*, white, striped with rose, of regular fine form; *Teutonia*, a very remarkable variety. This variety received a special premium at the great show in Ghent, and was from thence carried to Vienna, where it also received another of like value; its singularity consists in its having, at the same time, flowers of pure white, and rose colour, spotted and striped with white. Here, on one plant, we saw white flowers marked with rose, and others deep rose colour; on another plant they were quite different, being of a deep flesh colour, distinctly ranged through the petals with violet veins; the flower, a very perfect shape, and considering its sportive character, is truly a desirable variety. One of the most remarkable varieties in the collection, and one on which the eye first rests, is *Floyii*. Mr. W. owns the old mother or original plant, raised by Mr. FLOY, which was purchased many years since at an extravagant price; it is truly a giant among the *Camellias*, and is without a parallel as it regards its robust habits. The foliage is most luxuriant and rich; the branches were bending under the weight of its profuse bloom; the buds very large and perfect shape; the flowers of large size, deep rose colour, profusely spotted with white; its magnificence on the stage cannot be exceeded, but the flowers are too large for bouquets, &c. *Eclipse* is a favorite with us; flowers red on white ground, and perfectly carnation striped. *Punctata*; the ground of this flower is flesh colour, beautifully spotted and striped with red. *Chandlerii*, is a fine old variety, with deep crimson flowers, blotched with white, the

flowers often varying very much as to the proportions of white and red. *William the IV*, fine regular form, rose ground, spotted with white. *Henry Favre*, perfect form, rose colour; *Sarah Frost* and *Hempsteadii*, both Philadelphia seedlings and fine regular flowers; *Cruciata*, pink, with white stripes; *Imbricata*, *Binneyii*, *Colvillii*, *Conspicua*, *Fordii*, *Francofortensis*, *Gunnell's Gen. Washington*; *Americana*, blush, with rose stripes and spots; *Floy's Neoboracensis*, a very large, bold flower, after the style of *Donkelaurei*, slightly striped with white; *Celestina*; *Tricolor*, beautifully striped like a carnation; *Pictoreum Roseum*; *Myrtifolia*, with numerous other varieties, were in a flowering state. The quantity of seedlings, in various stages of growth, is very great, and would number by thousands. These are mostly from seeds of flowers which had been crossed by superior varieties; we noticed the plants were labeled with the name of the parents from whence they sprung. Quite a number of these seedlings have shown flower the present winter, some of them of good character, but none to be compared with the magnificent varieties, C. WILDERII, and Mrs. ABBY WILDER, for which the Massachusetts Society awarded to Mr. W. a silver pitcher. By the way we noticed a flower of C. Mrs. WILDER, at Mr. Warren's store, (the present owner of the whole stock,) a few days since, which fully sustained the high character already given of it; it is undoubtedly the best white variety in existence, so perfect in shape, petals perfectly rose leaved, and the flower full and symmetrically formed; the tints of pink in it are very delicate, in some flowers hardly perceptible. We doubt whether Mr. WILDER will find among his thousands of seedlings, two more varieties that will excel or even equal these.

On the back of the Camellia house, and rising to the top of the wall, we noticed a superb plant of *Acacia spectabilis*, covering a space of 12 to 15 feet, completely, with its rich, golden yellow, ball-shaped flowers; we were informed that it had been two months in bloom.

Passing from the Camellia house into the third division, our attention was arrested by some large plants of *Cloth of Gold* and *Solfaterre* Roses, climbing up the rafter and over the house to the length of 15 to 20 feet, enriched with their clusters of yellow canary coloured flowers. These varieties, particularly *Cloth of Gold*, are said to be shy bloomers, but with proper treatment, Mr. WILDER says, they are free and constant. Most of the *Noisettes*, he informs us, should have plenty of room to ramble, where they will form flower spurs and continue to produce bloom, and that the knife should be used but sparingly on this class. This house is partly devoted to roses, which are all in fine condition, making robust shoots under the influence of Guano water. Among the new varieties, we noticed *Princess Adelaide*, (Tea,) with very large pale yellow, highly scented flowers; *Eliza Savage*, a large, splendid Tea rose; *Count de Paris*, (Tea;) *Souvenir de la Malmaison*, (Bourbon;) *Bourbon*, *Leveson Gower*, *Cezarine Souchet*, *Triomphe de la Duchesse*, *Le florifera*, *Hybrid Perpetuals*, *Commandant Fournier*, *Eugene Sue*, *Comte de Montalivet*, *Admiral D'Esting*, *Gen. Morangier*, *La Renoncula*. Several of these have been received this year, but are making strong flowering shoots.

In this house there was a large plant of *Heliotrope* planted in the ground, ten feet high, and four to five feet wide, that had been continually in bloom through the year, and from which bushels of flowers had been cut. There were myriads of young *Calceo-*

larías in the seed pans, from crosses of the splendid varieties exhibited by Mr. WILDER at the horticultural rooms the last season, and great numbers of vigorous plants were potted, many of them decidedly of a shrubby character, a desideratum for this plant, and we anticipate a grand display of beautiful novelties from this great number of seedlings.

There was also a great quantity of seedling Cinerarias, distributed in various parts of the different houses, just coming into bloom, of every tint and hue, some of them very fine. Not to be overlooked, were also seedling Japan Lilies in any quantity, a great proportion of which will show bloom the coming season. These are from crosses of *Lilium speciosum* with other varieties. Should these lilies prove hardy, they will be a great acquisition to the borders. To test their hardiness, Mr. W. has planted out a bed on trial; the probability is, that they will endure the winter with slight protection.

Among the new Fuchsias, the following were named, viz: the *Queen of the Virgins*, *Sir Henry Pottinger*, *Miss Milbank*, *Acantha*, *Miss Prettyman*, *Empress*, *Serratifolia*, *Lady of the Lake*, &c. Among other new plants just received, were 25 varieties of *Phlox*, and a dozen or more of *Geraniums*, most of them in a hopeful state. Among other new things, we saw a large plant of *Abuti-*

lon venosum, more robust than *A. striatum*, flowers much larger, of a deep orange and carmine colour. A plant of *Veronica speciosum*, just out of bloom, and a plant of *V. Lindleyi*, a new white variety, were also noticed. We were shown a new Clematis, *C. tubulosa mongolica*, from Caucasus, said to surpass all others of the tribe. Also, another plant, *Pitcairnia altenstenii*, a new plant, said to be very beautiful, of the Bromeliaceous family. Various new sorts of Epaeis were shown us, among them *E. pulchella*, a great beauty, the branches densely clothed with minute umbelliferous white flowers; *E. impressa alba*, with its tube-shaped flowers, spotted with red, and many others. Mr. WILDER has a great quantity of Seedling Azaleas in another house, at a little distance from the main house, which we have been describing. Part of these seedlings have already flowered, and some are of the character of *Va-riegata*, and other well known sorts. Many of them are in bud for the first time, and out of the lot some valuable varieties may be expected. Time would fail us to enumerate half the new and rare plants embraced in this collection. We must leave for further consideration, many things in the greenhouse, but more particularly the plants and trees in the open ground, which will be deferred until the proper season.

JOSEPH BRECK.

Boston, March 13, 1847.

AUTUMN GRAFTING AND SPRING BUDDING.

BY ROBERT NELSON, NEWBURYPORT, MASS.

[THE following interesting article is well worthy of the attention of our readers. MR. NELSON is a practical Danish horticulturist, and the climate of Denmark is so much like that of New-England, and the northern part

of our Union, that his experience in some points is more valuable in this country than that of European gardeners from warmer parallels of latitude.

The autumn-grafting and spring-budding

described, are, we believe, most useful and excellent variations of the modes of propagating trees and shrubs, by no means generally known or practiced in America. N. LONGWORTH, Esq., of Cincinnati, has performed spring-budding with success, and drew the attention of our readers to it, by a brief note, in a previous number (p. 145.) Besides the greater success for certain kinds of trees, which attends the modes of grafting and budding described by MR. NELSON, they are most valuable to the amateur, or commercial grower, who often receives grafts a little out of season; or who wishes, by spring-budding, to produce half a dozen trees from a scion, which, if used for grafting, would only serve for one or at most two trees.—ED.]

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Grafting and budding are so well known that hardly any thing new can be said about them. Nevertheless I hope, in communicating something of the experience of many years, that those less acquainted with these operations will find a few useful hints.

I will omit the common spring grafting on growing trees, and confine my remarks to root-grafting, described by MR. PHOENIX, on page 280 of *The Horticulturist*. Notwithstanding that root-grafting is, I suppose, as old as propagating plants by pieces of roots, it is not as commonly practiced, as it ought to be.

In the winter of 1835, after having visited the most celebrated gardens on the continent, I returned to my native country, Denmark, 55° north latitude, and for the first time tried root-grafting. I applied this method on apples, pears, plums, cherries, peaches and apricots, with good success; Madeira nuts, filberts and roses would not take to my satisfaction, and black English mulberries would not grow at all; they were all grafted in February, and put into

boxes. I thought it however difficult to keep them free from frost in the cellar, unless the latter was so warm as to cause the grafts to shoot. I therefore let the grafted roots freeze in the boxes, as soon as grafted, and placed them in an ice-house, where they remained in that temperature, I may say frozen, till the latter part of April, in very good condition. But there was another and still greater, difficulty now in the way, which was to get them planted sufficiently early in that busy season, when every kind of garden work must be performed; and even if this could be done, the grafts of some trees often require protection against the powerful sun, and suffer much from drouth, before they could strike roots.

Instructions for transplanting the different kinds of plants are given in the works on gardening; but much easier and plainer is it to follow the hints, which Nature herself teaches, and to transplant every kind in its *season of rest*, which is very different, indeed, according to the different kinds, in spring, summer and fall, but *invariably when the plant has ripened its fruit*. At that period all its juices are at rest, and the plant, being in a sleeping state, may easily be treated, as the gardener wishes.

Accordingly, the ensuing *fall*, as soon as the trees dropped their leaves, I began to root-graft the same kinds as before, and planted them directly out in nursery rows, protecting them with dry leaves, covered with pine twigs, in order that the wind should not blow them away. As I wished to keep the ground open for further planting, I also covered some beds in the same manner.

In this way I continued root-grafting and planting, till towards christmas, when the winter set in. Though it was rather a severe winter, and there was but very little

snow, I found my grafts in spring in excellent condition. Even roses, filberts and Madeira nuts had taken readily, but the black English mulberries were lost, and it seems that this kind of fruit would not endure root-grafting, though I *sometimes* succeeded in grafting them on growing stocks of white mulberries in spring.*

As several ornamental shrubs begin to grow so early in spring, as to render it very difficult to root-graft or transplant them at that season, without injuring them, I applied the same method to *Cydonia japonica*, (the Japan Quince,) *Daphne indica*, and others, with very good success, grafting the first on hawthorn and quince roots, the latter on the common Mezereum.

The ensuing fall, 1836, I grafted filberts and Cosford nuts, several roses, including *Rosa cristata*, *Duchesse d'Angoulême*, *Queen of Denmark*, and others, on stems two and three feet high, covering them by tying straw around them. They endured the winter very well, and some of the roses flowered the first summer. In October following, I procured two plants of the tree *Pæonias*, *arborea* and *papaveracea*. Both having but very poor roots, I was obliged to cut off the tops, and being desirous to save them, I grafted those scions on some bulbs of the common Red Pæony (*P. officinalis*), planted them in a proper soil, and, at the approach of winter covered them with about three inches of peat. In April I removed the peat, and found the plants all in excellent condition. On the 26th of October last, I grafted six scions of *Pæonia arborea* on com-

mon Pæony tubers in the garden at this place, and they now appear very healthy. I have tried *cleft* as well as *whip-grafting*, on roots, with equal success.

In all fall grafting, I tie the grafts very fast, leaving a bud on the scion only a quarter of an inch from its lower end, and on planting out, I place this bud just below the surface. I leave two buds more on the scion, but place the most confidence on the lower bud. I cover the whole wound with melted grafting wax, as also the top of the scion, to keep air and moisture from them. I like spring grafting on growing trees; but as it is desirable to extend the season for propagating as much as possible, I shall greatly prefer, according to my own experience, and for many other reasons, to perform my root-grafting in the autumn.

BUDDING is so well described in your work on the "Fruits and Fruit Trees of America," that nothing valuable could be added to that description. Very little, however, is said of *spring budding*, and I hope, therefore, it may not be amiss, if, in a few words, I give my experience on this method of budding; and why budding should not do as well in May as in August.

Many years ago I met with an account of budding roses in spring, in a German gardening journal (Weissensee Blumenzeitung, if my memory serves me, for 1832) and tried it directly. According to the directions I commenced in March, before the bark would peel, by cutting out buds with a small piece of wood, making a similar cut on the stock, inserting the buds so that the inner bark of bud and stock should exactly correspond, and tying them firmly together. This was more properly *bud-grafting* than real budding; but I continued my experiments till the middle of May, and as soon as the bark would peel, I inserted my buds in the common way.

* That fine fruit, the large black English mulberry, is always a scarce plant, even in England, from the difficulty of propagating it. We have, however, been quite successful by grafting it in the spring, upon pieces of the roots of our common Red Mulberry of the woods, (*Morus nigra*), and planting the roots as soon as grafted, in a hot-bed, made with only half as much stable manure, and consequently bottom heat, as usual.—Ep.

It was somewhat difficult to insert the buds well, as there was no stalk or leaf stem to take hold of. I therefore took a drop of grafting wax on the point of a finger, to which I made bark of the bud, as soon as cut, adhere, and performed the operation very easily. I tied it, as I always do, with two strings of mats, and as the spring winds in my native country are very dry, I covered all, even the bud itself, with grafting wax, put on with a brush, in a melted state. My spring budded roses were growing very

rapidly, and some of them were flowering the first summer. I tried it also with great success on *Madeira Nuts*, *Peaches*, *Black English Mulberries*, *Weeping Ashes*, and *Weeping Roses*. They all ripened their wood sufficiently to stand the following winter well. As I gained a year by this method of budding, and in other respects was very well satisfied with it, I have always since that time continued to perform spring budding, as well as fall grafting.

March, 1847.

R. NELSON.

A NEW TONIC FOR THE PEAR TREE.

OUR readers have, no doubt, already noticed our frequent allusions of late to the use of *Iron* as a remedy for some of the diseases of the pear tree.

In our last number we gave a translation of the new discovery of M. GRIS of the efficacy of the *sulphate of iron* in restoring the healthy state of the leaves of plants which had become pale, sickly, or *chlorotic*.

Beside this, we have for several years past, frequently observed the apparent good effects of the *oxides of iron* (iron rust) when applied to the roots of the pear tree. Our friend, the late Dr. REED, of Poughkeepsie, N. Y., was the first person whom we knew to make a direct application of oxide of iron to the soil about his pear trees. This he did in the form of blacksmith scoria and cinders. The result was a remarkably healthy growth, fair fruit, and as he believed an exemption from the *fire blight*. He founded his practice (as a correspondent, has already observed) upon the fine productive condition of the pear tree in an iron district with which he was familiar in the Eastern States.

The practice of applying oxides of iron

is one which has been ignorantly, but more or less successfully, employed by cultivators, in this country, here and there, for 50 years past. Old rusty pieces of iron were either laid round the trunk of the tree, or hung upon the branches. Its good effect has been attributed, by some, to electrical action, but it is far more probable that it is solely owing to the gradual mingling of the oxide of the old iron with the soil at the roots of the tree.

M. GRIS, in the article we have presented, has given us the details and the result of his experiments with *sulphate of iron*, but we have not seen from him any *rationale*, of the way in which the normal health of the foliage, and thereby the plant, is restored.

In order to understand this, we must glance briefly at the food of plants and the manner in which the nutritive process is carried on.

Carbon and the *elements of water*, constitute by far the largest part of all plants. As the carbon forms the woody fibre, it is evident that the growth and increase of all trees and plants must depend on their ca-

A NEW TONIC FOR THE PEAR TREE.

capacity for taking up and digesting this substance.

Now the carbon, which is the food of plants, is not found or taken up by them in a free or simple state, but in the form of *carbonic acid*—that is, *carbon* combined with *oxygen*. This carbonic acid abounds in the air, which is the food of plants taken up by their leaves; and in the water, containing solutions of rich soils, which is taken up by their roots. According to LIEBIG, much the largest portion of the carbonic acid, which forms the food of plants, is absorbed by the surface of the leaves.

But as carbon, and not carbonic acid, is the food of plants, it is evident that the latter must have the power of *decomposing* carbonic acid, so as to leave them in possession of the carbon, and also of expelling the superfluous oxygen.

This admirable power is possessed by the leaves of plants in a manner somewhat analogous to that belonging to the lungs of animals. Carbonic acid, in the form of gas, is absorbed by the green leaves of a growing plant, and is exposed by them to the action of the sun's light; and the oxygen is then, by the force of the vital power, separated from the carbonic acid, and given out by the leaves, while the carbon which remains enters into the system of the tree or plants, and immediately increases its bulk.

Upon the rapidity with which this decomposition or digestion of carbonic acid goes on, must, of course, depend the vigor and growth of the tree. It is not only necessary to its action that the leaves of plants should be exposed to the light, but that they should be green. Plants grown in the dark are always not only comparatively feeble, and destitute of strength and substance, but they are also *colourless*. This is owing to the deficiency in carbon, from the want of the sun's light to assist in separating

it from the carbonic acid which they absorb.

A diseased or sickly state of plants, also immediately arises, if, from any cause, the leaves lose their *green colour*—for with the green colour is lost, in a great measure, the power of digesting their food, that is, separating the carbon from the oxygen.

Now the sulphate of iron used by M. GRIS, and the oxides of iron which we recommend for the pear, both, we conceive, act as a specific in restoring the natural green colour and consequent healthy action of the leaves of plants.

The bad health of many plants, with yellow chlorotic foliage, we conceive, arises from the irretention of an *excess of oxygen*—or from their not being able to expel the oxygen and assimilate the carbon of carbonic acid in a natural manner.

M. GRIS has proved that the salts of iron, applied to the surface of sickly yellow leaves, very speedily restores their green colour, and with it the health of the plant. The same result follows, in a less rapid manner, the absorption of the solutions of the salts of iron by the roots.

We believe, from our own observations, that the same effect is produced on the diseased foliage of the pear (and probably other fruit trees) by the application of common iron rust, or oxide of iron in small quantities. Whether the *peroxide of iron* acts by entering into combination with the excess of oxygen in pale and sickly foliage, or otherwise specifically upon the vital power of the plant itself, we are not yet able to say. The subject has not been noticed by chemists. BARON LIEBIG only says, "There are inorganic substances, the total want of which, in animals, is inevitably productive of death. Plants, for the same reason, cannot live unless supplied with certain metallic compounds." But though oxide of iron

enters into the composition of a large number of plants, chemists have not yet told us precisely what office it performs.

But since *peroxide of iron* forms a considerable part—from 3 to 8 per cent—of nearly all good soils, and since it is one of the constituents of plants, it is evidently necessary to their growth. We imagine it to exert a direct influence on the healthy condition and action of their green leaves. It is evident, therefore, that if a soil becomes exhausted of it, or if it is naturally deficient in quantity, certain kinds of vegetation will fail there, or succeed but imperfectly.

Now the most serious obstacle to the cultivation of the pear on the sea-coast, and perhaps in certain soils in the interior, is a kind of crack or blight, which affects the fruit when half or two-thirds grown. The green skin becomes rusty and discolored, the fruit ceases to enlarge, the skin cracks open, and is from that time worthless. At the same time, or, as we have remarked, often a little previously to this—the foliage is also discolored with numerous russetty or black spots—and the leaves become pale green and rather thin in texture—in other words, quite different from the thick deep green foliage of a vigorous tree. They usually drop from the tree, likewise, long before the usual season.

It is not difficult to see that this is in consequence of a chlorotic or unhealthy state in the cuticle of the leaf—which, having lost its normal green colour, is no longer able to obtain the requisite amount of carbon or nutritive food by the usual process of decomposing carbonic acid. The same thing is true of the fruit—the skin of which, so long as it remains green, acts in precisely the same way as the surface of the leaves.

To restore the health of pear trees blighted in this manner, it is necessary to restore the healthy condition of the leaves. It is evi-

dent from trial that the common manures will not effect this, since these trees often stand in gardens where the soil is annually enriched. It is also evident that they have exhausted something which the soil once contained—for these same trees, or the same varieties, once bore beautiful fruit and healthy leaves in the same ground.*

We are inclined to hope that *iron*, in some of its forms, may prove to be the substance in which those soils have become deficient; and that its judicious application may again restore apparently decaying varieties to sound health.

We therefore solicit the attention of our readers to the directions of M. GRIS, on p. 471 of this journal, for the proportions of the solution of sulphate of iron, so successfully used by him, and we beg them to make careful and repeated experiments with oxide of iron.

Perhaps the best form in which the latter can readily be had, is in the sweepings and cinders of the blacksmiths' shops,† and the rust of old iron. As yet it is difficult to say precisely what quantities should be used. It must be remembered, however, that as oxide of iron forms only a very small part of the composition of plants, it must be very *sparingly used*. We have seen half a peck of the blacksmith scoria, (which it must be remembered is in a good part composed of other matters,) applied to a full sized bearing pear tree with good effect. Three or

* Cultivators have conjectured that these varieties were themselves "run out" or exhausted, and have abandoned them for others. Any more vigorous sorts capable of making healthier foliage, will undoubtedly succeed in such soils where those of only ordinary vigor will fail. But it can not be denied that some of the newest pears have also lately been seen cracked and blighted in long cultivated soils on the sea coast.

† There are, chemically speaking, two oxides of iron—*peroxide* and *protoxide*. The colour of the former is blackish blue, of the latter, red. The scales driven off red hot iron under the anvil, are composed of peroxide and protoxide of iron. Iron rust is chiefly peroxide of iron.

four handfuls of iron rust, scattered over the surface of the soil, would, we should think, be a sufficient quantity for a full grown *chlorotic* pear tree. A heap of old iron might, if more convenient, be laid about the stem, as the rust would then find its way very gradually into the soil. But the most satisfactory mode, is to water the soil with solutions of iron water—made at first very weak, and increased in strength as may be indicated by the effects produced.

There are also certain soils, in some parts of the country, otherwise highly fertile, in which several sorts of apples are affected by a disease called the *bitter-rot*. We have little personal acquaintance with this malady, but if we understand it rightly, it arises from an unhealthy state of the skin of the fruit, and perhaps it may be prevented by the tonic that we have already pointed out.*

NOTES ON PEAR TREE BLIGHT AND RETARDING PEACH BLOSSOMS.

BY WM. ANDREWS, PENFIELD, OHIO.

SIR—What is commonly known as the *Fire Blight*, in the pear tree, is a subject of much interest at the present time, and has been the parent of many speculations, but I think it is not yet perfectly understood. I have no doubt that your theory of “Frozen Sap Blight,” is, in many respects, true; yet, I can not believe that the most sagacious observer, can always predict with certainty, a season of blight, for the reason that the disease, in its progress, does not demand a late growth of unripened wood, as a *sine qua non*. Trees, which have a late autumnal growth of unripened wood, will almost uniformly suffer more or less from the severe frosts of winter. Peach trees will often be killed to the ground. That is sometimes the case with the finer kinds of cherry trees, in our nurseries, as well as with pears, and is particularly and almost uniformly the case with *Catalpas*, when grown upon rich ground and left to nature. It becomes important then to ascertain whether there are any preventives of this late growth of wood, and if so, what they are. Planting trees upon dry soil, as you suggest, I consider as the most important. Indeed it is all-important for peach trees.

„Laying bare the roots” of our trees may answer the purpose, but I have a more simple remedy, which for two years past has proved effectual, when applied to the *Catalpa*. For two or three successive years, I had nearly all my *Catalpas* killed to the ground by the winter. In the summer of 1845, I determined, if possible, to save them, and about the 20th of August, while they were growing vigorously, I clipped off with my knife the ends of all the branches of the trees, to prevent their going higher. In the course of a week, the leaves had evidently changed their colour to a darker hue, the colour of the trunk and branches soon changed, and the wood ripened perfectly, so as to receive no injury from the succeeding winter. In August, 1846, I found that many of my trees had ripened their wood well, but such as were growing I clipped in

* A very remarkable exception to the usual want of natural congeniality to the pear tree, in sea side soils, occurs, as we find in some of the gardens of Plymouth, Mass. On learning, last autumn, with some surprise, the great perfection to which this fruit attains there, we applied to MR. WASHBURN, one of the most successful growers there, for a sample of his soil. On having it analyzed, by a distinguished chemist, we find that this soil differs from other fertile soils chiefly in containing a much larger proportion of oxide of iron.

the manner before described, and the consequence is, that they are now sound and uninjured. I know not why the same treatment should not cause pear trees, as well as others, to mature their wood perfectly, but have had little opportunity to prove it. I tried it in one instance, upon a cherry tree, with success. But I have suffered much from a blight, which was not the consequence of a late autumnal growth of wood. The spring and summer of 1845, were, in this vicinity, exceedingly dry. Most of my young pear trees lost their leaves about the first of August. Some time in September we had slight showers, which caused them to put forth new leaves, but the dry weather returning, these were soon scorched and withered, without any of them attaining their usual size. The winter found my trees in a starving, enfeebled condition. I lost the *tops* of most of my engrafted trees, and some of the stocks. The Bartlett, Easter Beurre, Beurre d'Arenberg, and Passe Colmar suffered much, while the Winter Neales escaped unharmed. In February, I discovered the blight upon some of the young trees, the whole tops of which were turning black; "black patches of shrivelled bark" were to be seen upon others, but I did not know the full extent of the evil till the coming spring. I cut scions from many of the trees, which afterwards proved blighted and worthless. The blight was not confined to my pear trees. I lost many fine plum trees, of two and three years' growth from the bud. That this disease was occasioned by the freezing and thawing of the sap appears probable, but it was clearly not referable to a late growth of unripened wood, as a primary cause. The coat of whitewash you advise, is the most hopeful remedy which occurs to me for this kind of blight.

Since writing the above I have been examining the trees in my nursery, with

reference to this subject. I find some cases of blight among my pear trees, confined to trees of feeble growth, but among the plum trees I can count hundreds which have been killed, or much injured during the last winter. The plum trees cast their leaves early in August last year, much earlier than ever before, in consequence, as we supposed, of the protracted drouth, the summer having been with us, like the preceding one, extremely dry. Few of these trees had *any* autumnal growth.

Is it not possible that the scorching rays of the sun of the last August and September, poured for six or eight successive weeks upon the naked, unprotected trunks and branches of these trees, may have been, at least, the predisposing cause of the malady with which they are affected?

Permit me here to say, that I have had much faith in the perfection of your theory of Fire Blight, and have supposed that it contained a solution of the whole mystery. I had supposed that (the Insect Blight excepted) unripened wood was absolutely necessary to its existence, and had flattered myself that we should soon have the disease under our control. You may then easily imagine that the truth, deduced from facts which had come under my observation during the last two years, was unwelcome; but unwelcome as it was, and is, it is not too strongly stated, when I say that where I have lost, *by blight*, one tree which had a late autumnal growth of wood, I have lost *ten* others which had no autumnal growth, but which ripened their wood and lost their leaves earlier than is desirable.

I have extended my remarks upon blight much farther than I at first intended. I wish to say a few words upon the preservation of the blossom buds of peach trees from destruction during the winter. I have, in an adjoining township, remarked for several

years, two peach trees to be heavily laden with fruit, when the blossom buds upon the trees in all the surrounding country had been killed by frost. These two had no advantage of soil over others, and none of location, except that they stood on the north side of a board fence, which was about four feet and a half high. The owner informed me that he had been in the habit of throwing around them chips or "*swingling tow*," while the ground was frozen, to retain the frost there. A highly intelligent gentleman informed me that he had practiced, for years, heaping snow around his trees, without deriving the least benefit from it, and he thought the practice was rather injurious to the trees. Relying upon his testimony, I have concluded that the fence is more to be depended on for protection than any temporary covering of the roots, especially as the fruit buds are sometimes so far developed in the autumn as to be killed by the first severe frosts of winter. The partial shelter from the rays of the sun afforded by a high, close board fence, during the autumn, the thaws of winter and of early spring, to the trunks and branches, as well as the roots of the trees, will, I think, often prove a sufficient protection. If the bark of the peach tree will bear the *whitewash*, which you recommend for pears, I think it is worthy of a trial. I am sir, very respectfully yours.

WM. ANDREWS.

Penfield, Loraine Co. O., March 26, 1847.

REMARKS.—MR. ANDREWS' communication is an interesting one, because it presents *facts* for consideration.

We are inclined to the opinion that the mortality among the trees described by him is not properly any form of the disease known to cultivators as the pear tree *blight*. We think, from the description, it is the effect of mere starvation—the supply of food and moisture being absolutely cut off, in the height of the growing season, by the extreme drouth alluded. There is no more certain way of destroying the life of a tree, than that of destroying all its leaves in mid-summer—especially if this is continued by taking off the second growth of foliage as soon as it appears—and this was precisely the effect of the dry summer in MR. ANDREWS' soil and situation. We saw the same effect in this neighborhood, in 1843, on a large plat of young pear trees on a dry subsoil. They lost their leaves, were greatly enfeebled, many died, partially, before winter, and others, from their debility, were destroyed by the succeeding winter—the latter effect, perhaps, being aided by the crude juices remaining in the tree, the leaves not being in a state duly to elaborate them.

The hints on retarding the peach tree we commend to the attention of those in the interior, who suffer from the effects of spring frosts on the blossoms of this fine fruit.—
ED.

REVIEW.

THE JOURNAL OF THE HORTICULTURAL SOCIETY OF LONDON. Vol. I, Parts III and IV; Vol. II, Part I. Published by the Society, 1847.

WE have spoken of the character of this Journal at some length in a former number, p. 87. There are several interesting articles and descriptions of many new plants, in the numbers now before us. We are able at the present moment only to notice one.

ART. VII, in Part I, of the new volume, is from the Professor of Chemistry to the Society, Mr. SOLLY. It is entitled, *Further Observations on the Influence of Electricity on Vegetation*. We remarked, in reviewing the first two numbers of this Journal, how unsatisfactory had been all the galvanic experiments which were carefully made with the plates of copper and zinc, after the method given by Mr. Ross, in his remarkable statement two years ago before the FARMER'S CLUB, in New-York, as well as those undertaken to verify Dr. FORSTER's experiments of enclosing plots of ground with copper wires. These experiments have been repeated again and again in England, and almost universally without the least success. In 1845, we applied the plates of copper and zinc to rows of plants in the open ground, without producing any perceptible effect whatever. And, subsequently, R. L. PELL, Esq., of Pelham farm, N. Y., who exhibited plants *in pots* before the *Farmer's Club*, in New-York, which had been submitted to galvanic action, with what was at the time considered satisfactory results, has informed us that all experiments tried afterwards, *upon plants in the open ground*, completely failed.

As very extraordinary accounts have been given of the supposed or imputed effects of

electricity upon vegetation, all accurate and faithful experiments that bear directly upon this subject, are in the highest degree interesting. That electricity may hereafter become a powerful agent in culture, we are strongly inclined to believe; but at the same time it must be admitted, that little or no progress whatever has been made towards a discovery of the manner in which it is to be successfully applied.

In a preceding number of the Journal I drew attention to the subject of electricity in connection with the growth of plants, and briefly recapitulated some of the more important of the numerous investigations which have been made during the last hundred years, with a view of determining the nature and extent of the influence which electricity has been supposed to exert on vegetation. I also described a few of the experiments on this subject which were made last year in the gardens of the Horticultural Society at Chiswick; the general tendency of which, as far as the results of so comparatively small a series of experiments may be trusted, was certainly opposed to the view that electricity in its ordinary forms exerts any very marked influence on the growth of plants. The experiments described were designed with the object of endeavoring to augment or diminish the natural supply of electricity which, under ordinary circumstances, might be supposed to affect the plants; for it was imagined that if this power played so important a part in the phenomena of vegetation, any means which could either diminish or increase the natural quantity of electricity in the earth on plants would necessarily either assist or retard the growth of such plants. No result of this kind, however, was produced; but this was of course only negative evidence, which might be influenced by the form of the experiments and other circumstances; and in drawing the general conclusion that the direct effects of electricity on the growth of plants is far less than is commonly supposed, I was led to do so by other experiments than those described. Some of these I propose now to mention.

In the experiments at Chiswick just alluded to, no direct attempts were made to increase the natural effects of electricity by augmenting its quantity from artificial sources, in the manner described with such opposite results by the electricians of the last century; I was, however, enabled to make a series of observations of this nature through the kindness of Lord Hill, who intrusted the management of the following experiments to his excellent gardener, Mr. F. Nieman, under whose superintendence I was quite certain they would be carefully and accurately carried out, and the results minutely observed and noted.

The place selected for the experiments was one of the grape-houses in his Lordship's garden at Hawkstone, in which the convenience of a dry warm room attached was obtained; in this room, which was in fact part of the storehouse, boarded over above the furnace, a powerful cylinder electrical machine was arranged. The cylinder of the machine was about 20 inches by 16 inches, and was very well insulated, so that although the room was not always so dry as might have been wished, the machine always gave abundance of electricity even in wet and damp weather. Stout glass tubes of about five feet long passed through the back wall of this room into the grape-house, the tubes projecting several inches from the wall on either side into the store-room and grape-house. The walls were nearly four feet thick, being double, and containing flues. Through these tubes copper wires of the 12th of an inch in diameter were carried. One end of each being connected with one of the two conductors of the electrical machine, the other ends of the wires being fastened to two rings of wire placed on the top of the separate stools well insulated with glass legs a foot high. Each conductor of the machine was thus connected with, and in fact made one with an insulated stool in the grape-house, the stools being placed at a distance of some feet from each other, and the wire suspended from the frame work of the house by loops of white silk. When thus arranged, sharp and powerful sparks could be drawn in abundance from any part of the wires or from the tops of the stools when the machine was worked; whilst the latter was so completely apart from the house and plants as not to be at all affected by the moisture, &c., necessarily present in the grape-house. It was also found that a pot of moderately moist earth containing a growing plant, when placed upon the wire circle attached to the top of each stool, became thoroughly charged with electricity when the machine was worked, and gave abundant sparks to the hand or a piece of metal.

The first experiment was made in October, 1845. Four sets of pots were taken, in all respects perfectly alike; each set consisting of five pots containing, 1, young plants of French beans; 2, young plants of the common scarlet geranium; 3, young plants of strawberry; 4, seeds of wheat; and 5th, seeds of mustard and cress. One series was placed on the wire ring on the insulated stool connected with the positive conductor of the machine; a second on that connected with the negative; a third on a similar stool of wood wholly uninsulated, placed near the insulated stools as a standard of comparison, whilst the last was sunk in tan and exposed to the influence of bottom heat. The experiment was carried on for four weeks, the two stools being strongly electrified four hours a day, namely, from ten to twelve in the morning, and from two till four in the afternoon; during this time the French beans came into blossom and formed pods. Those which were positively electrified were rather more forward than either of the other three sets, appearing to be about four days more advanced. Mr. Nieman, however, does not think that this could be fairly attributed to the influence of the electricity, but that it was caused by accidental circumstances. In the other plants no difference whatever could be observed, and the

seeds came up at the same time and were in all respects perfectly alike.

Being rather surprised at this result, and having certainly expected to observe some little difference in the germination of the seeds, I requested the experiment might be repeated with some other seeds, and this was accordingly done in January, 1846, with pots containing wheat, barley, oats, mustard, and rye. The action of the machine was kept up four hours a day for three weeks, but in this case also no perceptible difference whatever could be observed. As in these two experiments, however, the conditions were very unlike those which ever can occur in nature, another experiment was tried at the suggestion of my friend, the Rev. E. Sidney, in which the plants themselves were left quite free and untouched, a peculiar electric state being brought about by induction, so as to resemble as far as possible the effect of an electrified cloud. For this purpose the insulated stools were removed and a branched wire terminating in several points connected with the wire from the positive conductor of the machine was suspended over an uninsulated pot in which wheat was sown, a wire from the negative conductor being connected with the ground as in the ordinary manner of working a machine. The machine was worked as before four hours a day, and consequently the germinating wheat was exposed every day to the influence of the positive electricity given off from the pointed wires suspended a few inches above it. Another similar pot of wheat was kept by way of standard, and on comparing it with the electrified wheat from day to day no difference whatever could be observed.

Since to some extent plants growing thus under glass can never be fairly compared with those growing naturally in the open air, it became desirable to make an experiment with plants growing wholly in the open air, and for this purpose three sets of pots were arranged in the open air, two being placed on insulated stools, and the third placed close by, but uninsulated, the three being in all other respects perfectly alike. One stool was connected by wire with the positive, and the other with the negative conductor of the machine. Six pots were taken in each series, containing seeds of French beans, spinach, cauliflower, turneps, cabbage, and mustard. The machine was worked four hours a day, from ten till twelve in the morning, and from four till six in the afternoon; the experiment was commenced early in July and continued till nearly the middle of August, and the weather being remarkably fine and warm, the machine worked well and gave abundance of electricity. In the middle of August the working of the machine was discontinued, the plants were all then perfectly similar, and during the whole time of carrying on the experiment no perceptible difference could be observed in any of the pots.

The general result to be drawn from these four experiments made on different kinds of plants is certainly opposed to the idea of much influence being exerted by free electricity on the growth of plants under ordinary circumstances. It is very possible that the arrangements devised for the purpose of those experiments were by no means the best, or those most fitted to exalt the effects sought for, but

nevertheless a number of seeds and young plants were placed four hours a day under the influence of an unusual quantity of negative and positive electricity, and it is hardly possible to doubt that some effect would have been apparent were the free electricity of the earth and air of so much importance in connection with vegetation as has been supposed.

LITERARY NOTICES.

I. TRANSACTIONS OF THE MASSACHUSETTS HORTICULTURAL SOCIETY.—Our readers will already have noticed the announcement that this Society is about to publish a very beautiful edition of its Transactions, in a serial form, to be issued once in every two months.

The work will be not merely a record of the exhibitions held, and the business transacted by the Society. It will also contain able papers from its numerous regular and corresponding members, embracing by far the largest portion of the practical skill and talent in the country.

Besides this, it will be richly illustrated with coloured plates of fruits and flowering plants, executed in a very superior manner. These plates will be accompanied by authentic descriptions of the varieties represented, and will add very largely to the value, as well as the beauty of the work.

The literary supervision of the *Transactions* will be undertaken by J. E. TESCHER, Esq., a gentleman distinguished for his scientific attainments, and his devotion to the interests of Horticulture. In order to insure, as perfectly as possible, authenticity and correctness in the nomenclature and description of the products of horticulture, the *Committees* of Fruits, Flowers, Vegetables, &c., will also carefully examine and arrange all materials on these subjects, before publication. We shall, therefore, confidently expect a work of rare excellence, beautiful execution, and which may be looked upon as authentic, in all

matters relating to the science of horticulture in New-England.

The admirable spirit and zeal with which this Society has been conducted, has won for it not only the entire confidence, but also the most generous patronage of the most distinguished citizens of Boston. We must be allowed to say that this is due, in no small degree, to the untiring devotion of mind and body to its interests, manifested for years past by its President, and the thorough and practical committees which share its executive labors with him.

The same force and intelligence will, we doubt not, be carried into this publication of its new *Transactions*, and we therefore commend the work, with great confidence, to the attention of our readers.

II. THE COLOURED EDITION of the *Fruit and Fruit Trees of America*, by A. J. DOWNING, announced for publication last winter, has been unavoidably delayed by the length of time required by the artists in Paris, engaged in executing the plates. The largest portion of the latter have now, however, been received by the late French packets, and our publishers, Messrs. Wiley and Putnam, New-York, expect to issue the work, complete in one beautiful 8vo volume, about the middle of May.

III. Messrs. Wiley and Putnam have just issued the *eighth edition* of our *Fruit and Fruit Trees of America*, in 12mo., with numerous revisions and corrections.

IV. The same publishers have in press, and will publish in a fortnight, a reprint of a valuable new English work, with considerable additions and notes by the editor of this journal, entitled, *Hints to Persons* *about Building in the Country*, by A. J. DOWNING; and *Hints to Young Architects*, calculated to facilitate practical operations, etc., by GEORGE WIGHTWICK, architect, 8vo.

 FOREIGN NOTICES.

NEW FRENCH PEARS.—The city of Angers, associated with so many things in horticulture, has just enriched our fruit garden with several new pears, which the horticultural committee of that city have classed in the first rank of good fruits. Three of these novelties, are the result of the zeal and enlightened perseverance of M. GOUBAULT, gardener at Angers, and the COMICE HORTICOLE, has, to mark its appreciation of these results, decreed him a gold medal. The following is the description of the three new varieties of pears, originated by M. GOUBAULT, as given by M. BAPTISTE DESPERTES, member of the *Société Industrielle d'Angers*.

BEURRE GOUBAULT.—Size that of the *Belle de Bruxelles*; skin of a greenish yellow, marked with dots; eye open, but little depressed; stalk rather slender and long, (longue de 0^m 06. a' 0^m) flesh fine grained, buttery, perfumed, slightly coarse-grained towards the core, of very good flavor. It ripens in the first half of September.

DOYENNE GOUBAULT.—Size larger than that of *Doyenne d'Hiver*; flesh melting, perfumed, flavor exquisite; colour yellow, marked with gray dots. It commences to ripen in November, and will keep till April. This is a most excellent fruit of the first quality, which is destined to have a place in all fruit gardens.

BEURRE SUPERFINE.—Fruit a little elongated, nearly 4 inches high, and 2½ in its widest diameter, and more or less angular or irregular (*tourmenté*) in its outline, especially towards the stalk, which is thick and swollen at its base, and rather short, (longue de 0^m 03;) skin yellowish gray, becoming yellow at maturity, when it is more or less covered with reddish dots, and lines forming a kind of net work. The sunny side is marked with some red spots. Flesh fine-grained, buttery, full of juice, highly perfumed and excellent; ripe at the end of September. This, like the two first, is a fruit of the first quality. *Revue Horticole*.

[Col. WILDER has just sent us a tree of each of the foregoing new varieties, which, as usual, he has been among the first to introduce into the United States.—ED.]

AMERICAN GRAPES IN GERMANY.—The *Isabella* grape is attracting some attention in the interior of Europe. Our friend and correspondent, M. OTTO, director of the Royal Botanic Garden of Berlin, we understand first introduced it to the notice of German horticulturists, as a *climbing plant*, superior to almost every other, for purposes where luxuriance and

rapidity of growth are desirable, such as covering buildings, walks and arbors. The *Revue Horticole* gives an extract from a horticultural journal, published at Zurich, also loudly praising this native grape. We translate a paragraph or two:

"The shoots of the *Isabella Vine* grow ordinarily in a single season, from 9 to 18 feet, and its leaves when well developed, measure 9 or 10 inches long, and still more in breadth. They are of a fine green on the upper surface, and on the lower surface are covered with a white felt of fine nap, which adds singularly to the effect produced by them, when growing in masses, and put in motion by the wind.

No plant can be better than this for the decoration of parterres, for climbing trees, covering arbors, or unsightly garden walls, and it is the more suitable for this, from the rapidity of its growth and the *grandeur* of its leaves."

The writer goes on also to say, that it bears, as compared with European vines, *enormous crops of fruit*. He thinks though this fruit would not alone make a wine of much strength, yet it may be valuable for mixing with other grapes to communicate to the wine its peculiar aroma. This peculiar aroma, he says, prevents all the world from finding it agreeable as a table grape, though many persons are fond of it.

REINE CLAUDE DE BAVAY PLUM.—When in Brussels, some two years since, I visited the nursery of BAVAY, at Vilvorde, near that city. Among several new fruits, I found the new Plum *Reine Claude de Bavay*, of which he kindly presented me with a colored engraving, which I send herewith. (We give an outline, figure 115.) This plum was produced from the seed of the old *Reine Claude*, by a Belgian gentleman named Esperin; and I translate from the *Revue Horticole*, the following description, which is much more detailed than any I could possibly give from recollection:

"Although this plum has been already figured in several works on horticulture, we may be allowed to enlighten amateurs respecting its characters, after having seen its fruit produced by a tree, for which we are indebted to the kindness of Messieurs JAMIN and DURAND.

"This plum is more oviform than round;" it is longitudinally marked by little violet coloured veins on a yellowish ground, sometimes accompanied by little spots of the same colour, and covered with a waxlike and scarcely apparent bloom. Its flesh adheres slightly to the stone; the habit of the tree is similar to that of the old *Reine Claude* (*green gage*);

the wood is a little greyish; the branches are vigorous, and the leaves are large and of a beautiful green colour.

"This plum," although very good, is not equal to the old Reine Claude, but its chief value is the season of its maturity. This last year, notwithstanding the great heat we have experienced, it did not ripen until the 29th of September, a time when no fruit of the old Reine Claude can be found remaining."

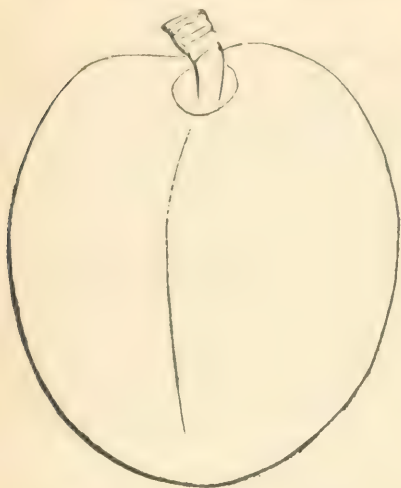


Fig. 115. *Reine Claude de Bavay Plum.*

From the above description, it is probable that this variety will be an acquisition to our list of late plums partaking as it does, in a great degree of the merits of the old Queen Claude or the well known Green Gage. We have it among our specimen trees, but have not yet cultivated it for sale.—S. B. PARSONS. *Flushing, Long Island, N. Y. April, 1847.*

TOBACCO WATER FOR DESTROYING INSECTS.—The tobacco water I have used is procured from the tobacco manufacturers. In the process of preparing tobacco for use, the dried herb is steeped for a certain time, and the water which it has absorbed, is afterwards expressed from it, into the water in which it had been steeped. This liquor is to be purchased at eight pence or ten pence per gallon from the manufacturers, and should be obtained as pure possible, without adulteration. One gallon of the liquor is stronger than any that could be made by steeping several pounds of tobacco in the same quantity of water. The mixture of the tobacco liquor with water is in the following proportions, and should be applied to the trees infected, by means of a garden engine, or syringe, taking care in its application, that it is given so forcibly that the under side of the foliage is well sprinkled. For the destruction of the common aphid, or green fly, I mix one gallon of tobacco liquor to five gallons of pure water; this quantity is sufficient to wash three trees twelve feet high,

and each extending fifteen feet in breadth. For destroying the black insect, one gallon of liquor to three of water. For destroying the caterpillars on the pear, apple, plum, and apricot trees, and on gooseberry bushes, one gallon of liquor to four of water. The above proportions have been frequently tried, and have never failed of success.—J. H. *London Hort. Mag.*



Fig. 116. *Spiraea prunifolia.*

SPIRÆA PRUNIFOLIA, WITH DOUBLE FLOWERS.—This charming shrub was introduced into Europe by Dr. Siebold, to whom our collections are indebted for so many novelties, only to be procured with the utmost difficulty. It deserves the attention of all amateurs, as well for its hardiness as its elegant habit and beautiful flowers. The Dutch traveller found it cultivated in the Japanese gardens, and

supposes its native country to be Corea, or the north of China. It is a shrub of from 6 to 9 feet high, and has upright, close, bushy, slender branches, which are covered with a smooth, ash-coloured bark, that detaches itself at a later period in thin scales. The leaves are oval, or ovate-elliptic, rounded at their base, obtuse or a little acute at their apex, downy beneath, denticulated at the edge. The flowers, which grow by threes or sixes, cover the whole length of the branches, are as white as snow, and very double, in consequence of a complete abortion of their stamens. Their shape is exactly like that of the *Ranunculus aconitifolius*, with double flowers, and their number and arrangement, together with a light and elegant bright green foliage, render this plant a charming addition to the shrubs which grow in the open air.—*Ch. L.* For the accompanying woodcut we are indebted to Mr. Van Houtte, of Ghent, who has a large stock of this plant for sale.—*Gard. Chron.*

.....
MANZANILLA WINE.—“In Andalusia it was no less easy for the Moor to encourage the use of water as a beverage, than to prohibit that of wine, which, if endued with strength, which sherry is, must destroy health when taken largely and habitually, as is occasionally found out at Gibraltar.—Hence the natives of Xerez themselves infinitely prefer a light wine called Manzanilla, which is made near San Lucar, and is at once much weaker and cheaper than sherry. The grape from whence it is produced grows on a poor and sandy soil. The vintage is very early, as the fruit is gathered before it is quite ripe. The wine is of a delicate pale straw colour, and is extremely wholesome; it strengthens the stomach, without heating or inebriating, like sherry. All classes are passionately fond of it, since the want of alcohol enables them to drink more of it than of stronger beverages, while the dry quality acts as a tonic during the relaxing heats.—It may be compared to the ancient Lesbian, which Horace quaffed so plentifully in the cool shade, and then described as never doing harm.—The men employed in the sherry wine vaults, and who have therefore that drink at their command, seldom touch it, but invariably, when their work is done, go to the neighboring shop to refresh themselves with a glass of ‘innocent’ Manzanilla. Among their betters, clubs are formed solely to drink it, and with ice water and a cigar it transports the consumer into a Moslem’s dream of paradise. It tastes better from the cask than out of the bottle, and improves as the cask gets low.

“The origin of the name has been disputed; some who prefer sound to sense derive it from *Manzanu*, an apple, which, had it been cider, might have passed; others connect it with the distant town of *Manzanilla* on the opposite side of the river, where it is neither made nor drunk. The real etymology is to be found in its striking resemblance to the bitter flavour of the flowers of *Chamomile* (*manzanilla*) which are used by our doctors to make a medicinal tea, and by those of Spain for fomentations. This flavour in the wine is so marked as to be at first quite disagreeable to strangers. If its eulogistic consumers are to be believed, the wine surpasses the tea in hygienic qualities: none, say they, who

drink it are troubled with gravel, stone, or gout. Certainly, it is eminently free from acidity. The very best Manzanilla is to be had in London of Messrs. Gorman, No. 16 Mark Lane. Since ‘*Drink it, ye dyspeptics*,’ was enjoined last year in the ‘Hand-book,’ the importation of this wine to England, which previously did not exceed ten butts, has in twelve short months overpassed two hundred; a compliment delicate as it is practical, which is acknowledged by the author—a drinker thereof—with most profound gratitude.

“By the way, the real thing to eat with Manzanilla is the *alpistera*. Make it thus:—To one pound of fine flour (mind that it is dry) add half a pound of double refined, well-sifted, pounded white sugar, the yolks and whites of four very fresh eggs, well beaten together; work up the mixture into a paste; roll it out very thin; divide it into squares about half the size of this page; cut it into strips, so that the paste should look like a hand with fingers; then dislocate the strips, then dip them into hot melted fine lard, until of a delicate pale brown; the more the strips are curled up and twisted the better; the *alpistera* should look like bunches of ribbons; powder them over with fine white sugar. They are then as pretty as nice. It is not easy to make them well; but the gods grant no excellence to mortals without much labor and thought. So Venus, the goddess of grace, was allied to hard-working Vulcan, who toiled and pondered at his fire, as every cook who has an aspiring soul has ever done.—*Ford’s Gatherings from Spain.*”

.....
ITALIAN ASPARAGUS GROWING.—We have so often occupied the attention of our readers with the subject of Asparagus, that it would seem that little remains to be said. It is, however, too excellent a vegetable, and its good qualities are so much impaired by the common mode of cooking it, that for ourselves, at least, every new fact connected with it, is interesting. We therefore make no scruple about mentioning the following method of growing asparagus at Nice, of which we have just heard a high account, but of which we have no personal knowledge. Now is the season for trying the experiment, and we trust that some of our correspondents will put it in practice.

Take a quart wine bottle, such as French wine is sold in; invert it over the head of an asparagus shoot, just rising above ground, and secure it by three sticks, so that it cannot be knocked over. If left in this state, the asparagus will grow up into the interior of the bottle, and being stimulated by the unusual heat and moisture it is there exposed to, will speedily fill it. As soon as this has taken place, the bottle must be broken, and the asparagus removed, when it will be found to have formed a thick head of tender delicate shoots, all eatable, and as compact as a cauliflower.—*Gard. Chron.*

.....
FROZEN ROOTS.—Trees may be transplanted, generally, from the month of October, until early in the spring. Now, it often happens that those dispatched during the winter months are touched by the frost, and the roots are found to be injured, in spite of the care taken in packing. For this diffi-

culty M. DAVISSÉ suggests the following remedy:—When first received, keep the plants in the packing, and put them under shelter in a temperate place, either a cellar or vault, or better still, if possible, in the ground; opening for this purpose, a trench long and deep enough to cover the roots and collars of the trees, then covering them afterwards with the earth taken from the trench, and leaving them in this condition until the thawing is complete; they are then taken from the trench, the plants are unpacked, and usually found to have returned to their normal state, which is not the case when they have been left in the open air. Plants that have been a long time packed, sometimes appeared to have suffered, and show wrinkles or

shrivelling upon the bark or roots, particularly in the autumn, when the bark is full of sap, at the time of taking up, which evaporating gradually, ceases to fill them as before. It is best then, immediately after unpacking, to plunge the roots and even the stems of the plants which have suffered, in water, for several hours. It is a good plan, and recommended by ANDRÉ THOUIN, to soak the roots in a tub or trench in which some cow manure has been diluted, so as to let it settle upon them. We know that this method has been effectual for trees sent to a distance in the spring, and when there is reason to fear the effect of drouth upon the roots.—*Pépin, in Revue Horticole.*

DOMESTIC NOTICES.

ENORMOUS GRAPE VINE.—I have lately made an excursion to Burlington, New-Jersey, for the purpose of obtaining the exact measurement of the most extraordinary grape vine I have ever heard of. It stands on a farm called *West Hill*, belonging to my late brother; two miles from the city of Burlington, New-Jersey, and the truth of what I am about to relate, may be readily verified, though in print it may really seem incredible. At three feet from the ground, it measures *six feet one inch* round the trunk, and at ten feet high, it is positively *three feet* in circumference!* It is a native male grape, and has been the wonder of the neighborhood, as long back as the memory of man reaches. It is still healthy, and its giant folds run over and cover four trees, one of which is a full sized white oak, and the others are quite large.

The casual reader as he glances over these unusual dimensions, scarcely realizes the enormity of this vine. Let us try if we can, to make it comprehensible, by a comparison or two. A string six feet one inch long, will enclose two tolerable corpulent people; and these dimensions are as large as a good sized washing tub. You may thus form an idea of its great growth. This vine grows near a springy soil on upland, its roots no doubt penetrating to the water. May not this teach us a lesson, to give the rootlets, wherever it is possible, access to a spring or running water; it may be a question too, whether we do not cut down our vines too much. I observed frequently in England, that a whole house was devoted to a single vine, generally of the Black Hamburgh, and I think they uniformly bore the finest grapes; to carry a single vine over a large grapery, would of course require several years of judicious trimming and management.

While on the subject of grape-, I might remark that something has yet to be learned of the most economical mode of raising them under cover. In a late number, (Dec. 1846), one of your correspondents noticed Mr. CHAUNCEY's, in Burlington, which were not protected in winter, and had the frames

used for forcing beds placed over them in the spring, thus economising, by using one set of glasses for two purposes. In the April HORTICULTURIST, (page 481,) a correspondent has written on "early peas, and cheap hot bed lights," for which I have taken a hint for future application to a grapery. If coarse cotton stuff, covered with oil, &c., as there recommended, is sufficient to protect early peas, it would undoubtedly answer for a summer grapery, and we may thus soon solve the important problem of raising the best foreign grapes without an immense cost. Why not, for instance, place your vines against a plain tight board fence, and stretch your prepared "coarse cotton stuff" over them, from the middle of March, until the fruit was ripe.—A grapery thus constructed, would at all events be easily ventilated, without the movement of troublesome shutters. I am led to believe, that tons of grapes will yet be produced in this cheap manner, enriching the grower, and gratifying the public by reduced prices. In this city last season, good foreign grapes were bought up eagerly, by retailers, at fifty cents a pound; when raised without heat, on a large scale, this would surely be a profitable crop to those who understand their management, and who do not invest too much in the buildings.

FRUITS IN PHILADELPHIA.—The above is an interesting topic, as indeed are all which relate to the production of good fruit. I am sorry to say, that with all the planting that has been done in this neighborhood, we rarely, if ever, can buy a truly excellent pear, and good grapes are beyond the means of most. Good apples, too, are rarely in profusion among us; in short our horticultural exhibitions, which make one's mouth water with specimens, have no counterpart in our markets, except it be in melons and peaches, in which we excel.—Pears I have observed, rarely do exceedingly well in the country, while a few city trees bear luxuriantly very fine fruit; it is owing to the superior protection and warmth of the town.

PLANTS.—So too with rare and beautiful plants; they are extremely difficult to procure; showing emphatically that the *business* of horticulture is not overdone; of the *Remontant*, or Perpetual roses,

* The celebrated vine at Hampton Court, which we have seen, does not, as regards size, deserve to be mentioned in the same paragraph.

scarcely a specimen can be bought there, except very small ones, or budded bushes. Some of the most beautiful things are unknown to the mass of the people, and are not to be had, though extremely easy of cultivation. I am very confident that not a dozen *Cedars of Lebanon* could be bought in the county of Philadelphia, though the tree is adapted to our climate, and stands unrivalled among evergreens. This is not so much to be wondered at, because the seeds brought over here rarely vegetate, and to bring the plants is expensive, and attended with loss; but one would suppose it would be easy enough to purchase such common plants as the *Irish Yew*, or *Wistaria sinensis*, or *Cobea scandens*, and a long list of things, indispensable to ornamented grounds; no such thing as a tolerably large box tree can be purchased, and yet land where these might grow and produce twenty per cent per annum, is plentiful and cheap; the people go for the "ready penny," and will grow a waggon load of cabbages for half the price of a single plant or a tree of a valuable kind. The city is justly famous for the taste for and abundance of common green house plants; but this has been the case so long, that we are enabled to look for an advance. I mention all this, to impress upon your readers the fact that there is yet a new and untrodden path—a public want unsupplied, which is open to enterprising individuals, who would study the demand. I really believe I could not now buy a *Triumph of Luxemburg* rose higher than three feet in our region of country, and yet they are easy of propagation, very valuable, tolerably hardy, and to be seen in few private gardens. Acres devoted to such plants as I have named just as they occurred to me, would surely prove more productive than if planted with common vegetables. Who would not buy fine large specimens of the best roses? The market is annually overstocked with forced plants of poor kinds, instead.

With a rapidly increasing population all around us, (Philadelphia was never more prosperous than now,) there are fine openings for men of skill, taste and perseverance to found extensive nurseries of trees and plants. I would exclude every common trashy article from a list to be grown and propagated, and devote space and time to valuable varieties which would bring several prices more than the inferior. To do this, a man should be versed in his business; should know what is desirable for permanent ornament, and should stem for a few years the current of opinion, until he could show what superior things to those in use nature has provided for the gratification of our tastes. This may all be bad advice to the initiated, and I throw it out as mere opinion for thinking men to reflect upon. Sure I am there is some reason in it. I have been led to this train of thought, from inspecting lately, various gardens in our neighborhood, in which few of the beautiful and valuable plants are grown, and have to regret when their names were mentioned as desirable possessions, to hear it said, "Oh! yes—but where are we to buy them?"

PLANTING IN CEMETERIES.—I regret that you will not follow my notion, suggested some time since, that HOLLY is the true hedge for enclosing cemetery lots, and indeed for any purpose, for which a hedge is required; the difficulty of procuring or

raising it is one drawback, but let me assure you there is nothing can ever equal in beauty or durability the holly, in the praise of which, I am an enthusiast.—*J. J. S., Philadelphia, April 10, 1847.*

[The European *Holly* does not bear the climate well, north of Philadelphia. It is, perhaps, the most beautiful evergreen hedge plant in the world, and we cannot too strongly recommend it to those farther south.—Ed.]

.....

TREATMENT AND CULTURE OF CACTI.—The collection and cultivation of the numerous species of the genera, comprised in the natural order, *Cactaceæ* during the last few years, has introduced many new and singular forms of vegetable life to the notice of our spirited patrons of Botany. They are beginning to attract general attention, both from the grotesque forms of a great number of them; and the beauty and profusion of the flowers of some of those already well known, render it no easy task to name their superior in splendor.

The culture of this order divides itself into two or three distinct methods of treatment. I shall confine myself in the meantime to what are more particularly styled *free flowering kinds*, viz: *Cereus speciosissimus* *C. jenkinsonii*, &c., and others of the order most nearly allied in habit.

And to see the way that even they are treated in the generality of gardens, one would hardly suppose them possessed of sufficient beauty or interest to render them worthy of any care. Even the *Epiphyllums*, which come under the same class, and always in request both from their splendour, and the season at which they flower, are mostly seen *closely laced up to a strong stalk*, the surface of the earth in the pots covered with moss, and if you examine the soil, it will be found half lime rubbish.

Surely these plants are worth a little more attention. A little of the trouble generally lavished on other plants of minor importance, would grow this family admirably, and give greater satisfaction to the lovers of floricultural beauty.

A mixture of loam, leaf mould, and thoroughly decayed cow dung, with a good proportion of white sand, and above all, the pots properly drained, will not fail to bring these plants to a high state of perfection and establish for them a situation in the front ranks of our green houses and plant stores, instead of, as at present, being stowed away in some obscure corner.

Shortly after they have done flowering, pot them into the prepared compost; thin out the least promising of the old and young wood, and place them into a moderately warmed house, until they start, growing freely. If the air of the house is *too close*, no wood of any strength will be produced. Reduce the allowance of water gradually, as they perfect their strongest growth, and when they have done growing, and the wood feels firm, they are much benefitted by being turned out of doors, in some half shady, but airy place where they can be *protected from wet*.

Plants thus managed, will be found to flower well, and can be forced, or retarded, so as to produce their flowers for a considerable length of time.

The *Epiphyllum*, and some of the weakest growing of the other varieties, make the best plants

when grafted on the *C. triangularis*, or *Pereskia*; but *C. Jenkinsii* and such like require no foreign stem to lift them into notice. I have seen an *Euphyllium truncatum* that was grafted on the *Pereskia*, the branches of which covered a space four feet in diameter, beautifully garnished all around.

I have no doubt but guano will prove a most excellent, as well as useful manure for the whole family of cacti. I have not sufficiently tested it, to state anything definite on its merits respecting the present genera.—DAVID HUNTER, Gardener to Robert Rennie, Esq. Lodi, New-Jersey.

QUERIES FROM MAINE.—A. J. Downing, Esq. I have read with great pleasure and some care, your book on *Fruits and Fruit Trees*, also from the *first*, the Horticulturist.

Already have these works awakened a lively interest in many minds, in this northern and eastern section of country. Among the untiring and zealous agents in the dissemination of choice fruits, is Col. H. LITTLE, of this city, well known to you, and whose labours will not fail ere long, to be duly appreciated.

The desire for choice fruits being excited, the very natural and most important inquiry arises, how shall such be successfully cultivated?

Notwithstanding the excellent directions contained in your work on the *nature, condition and preparation* of soils, there is still felt in particular cases the need of additional information.

In your treatise on fruits and trees, page 44, you say: "no fruit tree should be planted in a hole less than from 18 inches to 2 feet deep," &c. Mr. Eaton in his communication on transplanting trees in the January No. of the Horticulturist, says: "deep plowing is highly beneficial, . . . and the holes for the trees should be from 20 inches to 2 feet deep." In the critique on Mr. Eaton, in the March No., page 433, it is further directed "to subsoil plow to the depth of 18 or 20 inches," &c.

Now, so far as the *depth* is concerned, all this is important, but overlooks, as it seems to me, the following *considerations*, namely, whether the site for an orchard be a level on an undulating surface; the subsoil wet or dry; a gravelly pan or compact clay, and a warm or cold soil.

Suppose the site for an orchard, a level or nearly so, with a clay loam 10 or 12 inches deep; a compact clay subsoil, and the whole what is usually called a cold soil, as is often the case here, and such is the only spot for the orchard. I should not deem it wise to subsoil plough, or to spade with the view of making a soil, in part of the subsoil, and at so low an elevation. On the contrary, I would advise that the loam be thrown up by backfurrowing in one direction, until the top soil be 18 inches or 2 feet deep above the subsoil.

By this process, warm and dry ridges would be obtained, on which to set the trees.

[Subsoiling or trenching is of the greatest benefit in all soils, whether warm or cold, *provided the land is, or can be well drained*. If the land is level, and lies wet, deepening the soil is worse than useless, *unless it can previously be well drained*.—sloping lands will not of course need this, but

level soils with a retentive subsoil, should, if possible, always be drained by a few deep drains before subsoiling them.—Ed.]

If we suppose the soil and subsoil of such a site, to be warm and dry, then the subsoil plough may be used.

Again, if the surface be undulating, and the soil a deep gravelly loam 18 inches or 2 feet deep, I would use the subsoil plough only to loosen the soil.

There are other cases I might suppose, but the above are sufficient for my object, which is to show that the different conditions of soil require different modes of preparation. On the presumption that the requisite knowledge for preparing the ground according to the site, the nature and condition of the soil was general, my suggestions would be quite useless. My remarks, however, are based on the belief, that most people have not more knowledge in the one case than in the other.

In this climate, would you advise to plant the apple tree (on a gentle northern slope) 25 or 30 feet apart each way, the ground being wholly devoted to the orchard?

[The northern slope is not objectionable for the apple tree. Thirty-five feet is, we think, sufficiently close for apple trees. If planted 25 feet, it is not sufficient that the whole strength of the soil is given up to the trees; it will also need very frequent and plentiful dressings with manure to keep the trees in good bearing condition, or they will decline in a much greater ratio than the distance would indicate, when planted 40 feet apart.—Ed.]

Do the roots of the pear strike downwards; and should the subsoil be so compact as to prevent their entrance?

[The roots of the pear will not strike downward unless there is sufficiently good soil to invite them, and when this is the case, where there is plenty of sun and air, and good drainage, it is not injurious.—Ed.]

What the distance apart for pears, and what for plums on a like slope as the apple? [Twenty feet for pears, 16 to 18 feet for plums.—Ed.]

What is the probable age of the pear on the mountain ash and thorn? [From 12 to 20 years.]

On which would you advise to insert the pear? [On neither if you can get pear stocks. Either one is a tolerable substitute.]

What is the best size of the ash and thorn for this purpose? [Quite small, so as to be grafted in or near the ground.]

Should the mountain ash, like the thorn, be engrafted or budded close to the ground? Would you advise to insert the pear into the tops of the mountain ash when of considerable size, say one and a half inch in diameter or more? [We think the pear would be short lived if grafted in the head of a mountain ash tree.]

Are there any among the choice kinds of pears that would probably succeed on the mountain ash in this climate, that otherwise would not? [No doubt several of the beurrés would do so, but experience is wanted on this point.]

Would you recommend, in an orchard of pears

on their own stocks, to plant those inserted on the ash or thorn, in the middle of the squares, making the quincunx form? [This would be a very good mode.]

In transplanting, how much charcoal, how fine, and how applied to the tree? [Half a peck to each tree, if easily obtained, and it should be thoroughly mixed with the soil before planting.]

What is your opinion of leached ashes for such trees, how much, and how applied on a gravelly and clay loam. [It is one of the best manures for all fruit trees. Apply it as a top dressing, at the rate of 200 bushels to the acre, and put a small heap around the trunk every spring, to deter the peach worm.]

Would the want of a compost for planting trees, as recommended in your work on fruits, make it advisable to defer planting until another year? [Never plant trees unless you are ready to put your soil in proper order for it; for then it is very difficult to put it in equally good order afterwards.]

An answer to the foregoing queries, will confer a great favour on your distant correspondent.—Very respectfully yours, ELIAH BECKWITH. *Bangor, April, 1, 1847.*

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THE OSWEGO BEURRE PEAR.—An article in the February No. of the *Genesee Farmer*, has just met my eye, in which the editor of the horticultural department of that paper, objects to the name given by me to the Oswego Beurre, and calls on you to discontinue it. He says: "We find another instance of this throwing away a popular name, and adopting a new, in the case of the *Oswego Beurre*. This pear was originated by Mr. Walter Read, and called there, and known, where known at all, as *Read's Seedling*, a most appropriate name surely. We repeat, that this changing of names is the very way to perpetuate and multiply the errors and difficulties in which American pomology is so deeply involved. It seems that every man who finds a fruit he does not happen to be acquainted with, wants to give it a name of his own. The Horticulturist should discontinue this."

Having received several letters from sections of the country where the *Genesee Farmer* is circulated, asking for grafts of *Read's Seedling*, I am induced to enter my protest against dropping the name as given in the January No. of the Horticulturist, OSWEGO BUERRE or *Read's Seedling*. It should be written *Read*, that being the family orthography.

This pear was never grafted into any nursery before last spring, when it was put in mine, and recorded as the *Baldwin*, the name of the then owner of the only tree of the variety in existence. I told my foreman it was wrong, that we should call it the *Oswego Beurre*, or *Read's Seedling*. A definite terminology is desirable on all subjects, and especially so in Pomology. *Oswego Beurre* is the most definite name that can be chosen, giving the locality of its origin, a point of importance to the public, as it is the only American pear within my knowledge, having all of the requisites of a first rate fruit, *that has originated so far north*. It defines also the class to which it belongs, as it

possesses in the highest degree the Beurre properties in its buttery flesh. Mr. BARRY is mistaken in saying it is known here as *Read's Seedling*. The names *Oswego Beurre* and *Read's Seedling*, are connate, both having been given by me at the same time. It is a remarkable fact, that this tree which has born fruit for the last sixteen years, should not have drawn the attention of either market or amateur cultivators, and been named and propagated before.

To show the ignorance that prevails here, in relation to the value of fine pears, and present a reason perhaps, why the *Oswego Beurre* was not earlier brought before the public, I would state the fact that the *White Doyenne* or *Virgalieu*, and *Brown Beurre* varieties that have been most disseminated here, and *thrive here equally as well as the most hardy natives*, have been sold by our farmers for several years past, to fruit dealers at from 4 to 6 shillings per bushel, when in fact they were worth about as many dollars as they received shillings.

Deacon Walter Read, now deceased, who planted the tree, from which the Oswego Beurre was produced, was a man of high moral worth, and on whose narration of the history of the tree, personally given, I place the most implicit reliance, was neither a market or amateur cultivator, and had not on his premises a grafted or budded pear tree, but was a substantial farmer, with a large family who used the crop themselves, mostly before ripe, for baking, till within four or five years, since which time it has borne from twelve to sixteen bushels annually; and the family have sold a portion to fruit dealers in this village, by which means I discovered it, and have since purchased all of the crop for sale.

Believing that this pear is the most valuable variety known here at the north, for extensive cultivation, I was desirous, not only that it should retain the name by which it was at first christened, but that some additional facts of its history and qualities should be given. To enable me to give such facts without depending entirely on my own memory, or that of Deacon Read's, I went yesterday to the house of his widow, and from her and members of her family, of an age to know the history of the tree, as well as from several of the neighbors on whom I called to make inquiry, I find they do not essentially vary its history from that given me by Walter Read, four or five years since.

Their concurrent testimony establishes the following facts: that twenty-two or twenty-three years ago, Mr. Read had a very rich pear given him by a friend, that had but three seeds, which he saved, and planted between the roots of a stump; two came up, one was destroyed by the cattle, and the other stands now where it was originally planted—that it bore fruit according to the testimony of the widow, several of her children, and one observing neighbour, when it was but six years old; that it has borne a fair crop every year since it came into a bearing state, and has produced sixteen bushels in one year; that in the year 1834, when other varieties growing an equal distance from the lake, were nearly or totally destroyed by frost, the

Oswego Beurre bore a full crop; that it holds its fruit in severe gales of wind better than any other variety of large pears known to them; and that it was equally fine in cold and short seasons, when other fine varieties were indifferent.

There are one or two inaccuracies in the otherwise very complete description of this fruit, published by you in this journal, which no doubt grew out of the imperfect verbal account I gave on presenting the specimens last autumn.

The first relates to its parentage; that it was raised from a seed of the *White Doyenne*, is only a conjectural and probable, and not a certain point. Mr. READ did not at the time know the latter pear. I, however, from his description of the fruit, and time of ripening, etc., have no doubt that it was of this variety.

Secondly, I think the fruit averages large size; I found it this year to average quite as large as that of the *Brown Beurre* grown here, in a situation and soil entirely similar.

As regards the season of maturity, it was stated that it ripens with the *White Doyenne*. I think, though the specimens I gave you were ripe at that season, yet its average season is that of an *early winter* fruit. The first time I ever ate Oswego Beurre was in December; they were at maturity, and very delicious in January, 1846, a season peculiar here, for the early maturity and decay of fruit. This pear will ripen even if picked prematurely, and by attending to early and late picking, and proper ripening off afterwards, they may be eaten in perfection from the middle of October, to the middle of January.

I should have been glad if this fine fruit had not been prominently brought before the public, till all could have been furnished with grafts or trees without partiality, which from the very limited supply of grafts, it is now impossible to do. I can, however, still give the variety to amateurs and nurserymen, but not in the quantities desired by the latter.—J. W. P. ALLEN, *Oswego, N. Y., March 30th, 1847.*

REMARKS.—The fruit is not considered as *named* by pomologists, simply by its having one or more local titles, even if these are bestowed by those who have originated, or propagated it. It is not really *named* till a full description of it has been published in some pomological work or journal, of acknowledged authority; a description, written by some person whose acquaintance with fruit is sufficiently extensive to warrant him in describing a new variety. The merits of a name proposed by the originator or a local name that is widely known or highly appropriate, should receive due consideration from a pomologist, describing a new fruit, and the courtesy of science would lead him to adopt such names, unless there were sufficient reasons for not doing so.*

There is, Mr. BARRY has well remarked, a great desire to give new names to fruit in this country. It is an evil, however, which can only be remedied by a general knowledge of the rules, which must in

future govern Pomology in this country. These are the same as those which govern nomenclature in Natural Science generally; and which were, in the main, established by LINNÆUS himself. We shall very speedily publish the rules, as we understand them, for the benefit of our readers interested in uniformity of Pomological nomenclature.—Ed.

ASHES AROUND PEACH TREES.—As early as possible this month, (if not previously done) all peaches, nectarine and apricot, trees should be examined for the peach worm. By taking away the soil, three or four inches deep, it will soon be seen if the insect inhabits the bark there, by the oozing of gum. If such is the case, take the grubs out at once with the knife, and destroy them. To prevent them from attacking the tree again, form a small conical heap of *leached* ashes, or *air slaked* lime about each tree, from six inches to 8 inches high. We have found this a most effective remedy, as the insect (unless in much greater abundance than it is known here) rarely deposits its eggs any where except in the soft bark just at the surface of the ground, which by this heap of ashes or lime is covered. In the autumn the heap should be spread over the surface of the ground, and renewed again the next spring. *Fresh* lime or ashes is too strong except for large and old trees, and then can only be used in small quantities.

WATERMELONS.—The most successful grower of Watermelons that I ever knew, was a person who every year *turned under a piece of sod*, in a good meadow soil, and planted his "patch" thereon. He counted his crop by *waggon loads*, when his neighbours did theirs, raised on good, but old garden soil, by tens and scores only.

I may add, that the best Watermelon I have ever seen, is a roundish thin-rinded sort, known as the *Imperial*. It is solid, crisp and of the highest flavour, besides very productive.—X. Y. Z. *Trenton, N. J.*

WORCESTER HORT. SOCIETY.—We have received from the author, a neatly printed pamphlet of 84 pages, entitled *Transactions of the Worcester County Horticultural Society*, by GEORGE JACQUES.

This Society has been in active operation about 5 years; and, from the many excellent accounts we have of it, is exerting a very marked influence on the culture of the whole interior of Massachusetts.

The annual exhibition held last autumn, was an unusually rich one. In the report of the fruit committee, we find the following paragraph:

"The number of plates and baskets of specimens exhibited, could not have fallen much short of a thousand. The most numerous of these were *apples*, comprising quite a number of valuable varieties, some of them quite new. Of *pears*, there were nearly three hundred dishes upon the table, and scarcely an inferior specimen among the whole. Some of the *Seckel*, *Brown Beurre*, *Bartlett*, *Louis Bonne de Jersey*, and *Dix*, were truly magnificent. It would be safe to assert that a more beautiful display of this delicious fruit was never beheld in New England."

Among these we notice, in the detailed report, quite a number of local varieties which are highly

*The *Oswego Beurre* was really brought into notice by Mr. ALLEN. In Mr. READ'S hands it was unknown; the name is an expressive and appropriate one, and describing it for the first time, we had a perfect right to use our own judgment in fixing upon this as the standard name.

recommended. The climate and soil of Worcester county are remarkably favourable to fruit culture, and this pamphlet is worthy of the attention of those who desire to know something more of the spirit which governs its Horticultural Society.

ONONDAGA HORTICULTURAL SOCIETY.—A meeting of the friends of horticultural improvement,

was held at Syracuse on the 17th ult., when a Society under the above title was organized, a Constitution and By-laws adopted, and the following officers appointed:—E. W. Levenworth, Pres., Rufus Cossitt, Asahel Dolbear, James G. Tracey, and Dr. Loomis, Vice Presidents; Thomas Smith, Treasurer; D. C. LeRoy, Cor. Secretary, and C. B. Sedgwick, Rec. Secretary.

MASSACHUSETTS HORTICULTURAL SOCIETY.

Saturday, March 6th 1847.—The President in the Chair.

The Committee to whom was intrusted the publishing of the Transactions of the Society, reported verbally that their work had been accomplished.

Voted, That the foregoing report be accepted, and that copies of the Transactions of the Society be laid upon the table for distribution among the members of the Society.

The Committee of publication submitted a report upon the publishing of a new series of the Transactions of the Society, and it was

Voted, That the subject be recommended to the same Committee, with instructions to report a detailed plan of prosecution, with an estimate of the cost, the period of publication, the price at which it can be afforded to the members of the Society and the public, and report to the meeting as soon as practicable.

Voted, That the President of the Society be requested to petition the Legislature now in session, to extend the same patronage to the Massachusetts Hort. Society, that it does to the various Agricultural Societies of the State, to aid in carrying forward the general purposes of the Society, but especially to enable the Society to prosecute with vigor the publication of their Transactions, in which are to be described and figured the fruits and flowers of New-England, and particularly of Massachusetts.

A communication, accompanied with the Transactions of the Convention of Farmers, held in New-York, was received from the Hon. H. A. S. Dearborn, and it was

Voted, That the thanks of the Society be presented to the Hon. H. A. S. Dearborn.

A description, with colored plates, of two new pears, was received from W. D. Brinckle, M. D., of Philadelphia, a corresponding member of the Society, and it was

Voted, To place it in the hands of the Committee of Publication.

Josiah Lovett, of Beverly, presented the Society with a letter from Thomas Close, M. D. of Port Chester, in regard to two new apples.

Voted, To appoint a Committee to set the days of the next Annual Exhibition of the Society, and Samuel Walker, E. M. Richards, and C. M. Hovey, were appointed that committee.

John Washburn, Jr., of Plymouth, was elected a subscription member.

Geo. B. Emerson, Esq. was elected a corresponding member.

March 13, 1847.—President WILDER in the Chair.

The Committee on the Library, submitted the following report:

The Committee on the Library, having recently re-arranged the books, and published a new catalogue, which has been bound up with the Transactions of the Society, respectfully beg leave to report:

For the last two or three years but little money has been appropriated for the purchase of books, and in consequence but few new works have been added to the Library. The Committee had intended, on presenting their annual report, to have asked for an appropriation for the coming year, but in this they have been anticipated by a vote of the Society, and the amount of \$300 placed at their disposal, for the purchase of such books as may be selected from a list to be presented to the Society.

Agreeably thereto, your Committee would recommend the following works:

To complete sets already in the Library.—The Transactions of the London Horticultural Society up to the completion of

their quarto publication, and a continuation of them in octavo form, the first volume of which (in quarto by nos.) has just been completed.

London's Gardener's Magazine, to complete the work up to its discontinuance, about 15 vols.

Noisette's Jardin Fruiter, in 2 vols. with coloured plates.

Poitreau's Pomologie Francaise, several volumes with coloured plates.

Michaux's Sylva, to complete the work, 3 vols.

New Works.—Paxton's Magazine of Botany, 11 vols.

London's Rural Cemeteries, 1 vol.

" Hortus Lignosus, 1 vol.

" Encyclopedia of Trees, Shrubs, &c., 1 vol.

Lindley's Vegetable Kingdom, 1 vol.

Torrey and Gray's Flora, 1 vol.

A Manual of Practical Draining, 1 vol.

Low's Breeds of Domestic Animals, 4 vols., with splendid coloured plates.

Mrs. London's Ladies' Companion, 1 vol.

The Farmer's Dictionary, 1 vol.

The American Poulterer's Companion, 1 vol.

Should all these works be thought desirable to purchase, or should members have any other books which they would wish the Committee to add to the list, the amount required would exceed the appropriation. Your Committee believe that the sum of \$300 should be expended in the purchase of the most useful books in the list annexed, and that the Committee be authorized, should they deem it advisable to the interests of the Society, to purchase others, to have at their disposal \$100 for which they shall render a list at their next annual meeting.

They would inform the Society, that they have made choice of R. M. Copeland as Librarian, with the salary of \$50 per annum, and that they have set apart the hours from 11 to 1 o'clock of every Saturday of the year, when the Library will be open.

The regulations of the Library will be strictly enforced, and books kept out longer than the specified time, will be charged in a book for that purpose, to all members who do not comply with the rules established by the Society.

Believing that in no way can the interests of the Society be so well sustained, as in the possession of a valuable Library, where the amateur, or professional man, may resort for information on all subjects connected with the horticultural art, your Committee respectfully submit this report.

C. M. HOVEY,
JOSEPH BEECH, } Committee.
R. M. COPELAND,

Voted, That the report be accepted to the full amount of the appropriation, viz: \$300.

The Committee of Publication submitted a report in reference to the publishing of a new series of the Transactions of the Society, and it was

Voted, That the matter be recommended to the same committee, with instructions to furnish an estimate in detail of the cost of publication.

Voted, That the Recording Secretary be requested to send, through the collector, a copy of the Transactions of the Society to each of the members, and to such Horticultural, Agricultural, and Literary Societies as may be deemed advisable.

March 20, 1847.—President WILDER in the Chair.

The Committee on Publication submitted the following report:

The Committee on Publication, of the Massachusetts Horticultural Society respectfully represent, that they have accumulated sufficient matter to enable them to enter upon the

publication of a regular series of the Transactions of the Society, and to have recommended, unanimously, that these Transactions should be published with numerous colored engravings and outlines of fruits and flowers, executed in the best possible manner, by the most distinguished artists of the country, and more particularly of such fruits and flowers as are of native origin, and in accordance with a vote of the Society, signed the following as an outline of their plan and mode of publication:

1st. That the work be entitled, "Transactions of the Massachusetts Horticultural Society," and that no pains or expense be spared to make it worthy, both of the Society, and of the advanced and still advancing progress of Horticulture.

2d. That the form shall be royal octavo, which size the Committee believe will afford sufficient room for any fruits or flowers, of which plates may be required.

3d. That the work be stereotyped, and also the proceedings of the Society, and bound together at the period of its publication.

4th. The Committee contemplate to publish the work quarterly, or oftener, if necessary; and estimate the cost of 1000 copies of each number as follows:

For 4000 (more or less) splendid colored engravings, say,	\$600
Stereotyping,	70
Printing, paper, wrappers, &c.,	80
	<hr/> \$750

5th. To charge the members of the Society *seventy-five cents*, and the public *one dollar* for each part, which, including the publisher's commission, will be about the prime cost of the work.

The Committee would suggest that the Society, at some future time, offer premiums for essays on Horticultural subjects, for the purpose of publishing with the Transactions of the Society, and thereby render the work valuable to its members, and extremely useful to the public.

It will be seen by this plan, and these estimates, that your Committee contemplate the execution of the work in the very best style of excellence, believing that the sale of the work, executed in this manner, will pay all the expenses, yet, if it be only just above mediocrity, it may entail loss on the friends of the Society.

Your Committee would further state, that for the present, and until the demand for the work, by the members of the Society and the public, shall have been ascertained, that they intend to publish only two hundred copies of the first and second numbers; to enable them to do this, and prepare drawings, &c for future numbers, it may require the sum of one thousand dollars. After the two first parts are published, it is expected the sales will furnish the means to publish the succeeding numbers. Therefore

Voted, That the Committee of publication be requested to draw up and publish a prospectus of the Transactions of the Society, in accordance with the above plan, and proceed to print and publish said work at such periods as they may deem it expedient, and that they be, and hereby are, authorized to draw on the Treasurer of the Society for any sum not exceeding one thousand dollars, to defray the expenses thereof. All of which is respectfully submitted.

By order of the Committee.

SAMUEL WALKER.

Voted, That the report of the Committee of Publication be accepted.

The President reported, verbally, that he had petitioned the Legislature for a grant, equal to the patronage bestowed heretofore on *Agricultural Societies*, by the State, as requested by the Society.

Voted, That the meeting be dissolved.

April 3, 1847.—President WILDER in the Chair.

A letter was received from JOSIAH BRADLEE, Esq., an honorary member of the Society, enclosing a check for five hundred dollars, for the purpose of being added to the permanent fund for premiums on fruits and flowers, and it was

Voted, That the thanks of the Society be presented to our highly esteemed honorary member, JOSIAH BRADLEE, Esq., for his liberal donation of five hundred dollars. Also,

Voted, That the above vote be transmitted to Mr. Bradlee, with a complimentary letter by the Corresponding Secretary.

The President stated, that some months since, he had placed in the hands of Mr. De Wall, a corresponding member, residing at Antwerp, a private order for scions or trees of any new varieties of pears, that he might be able to furnish, and that it appeared from an extract of this gentleman's letter, that he considered the order *official*, and should send a package for the Society, since which no advices from him had been received.

The President further stated, that he had responded in part, to the intimated wishes of Mr. De Wall, by forwarding 7 vols. of valuable books, and should attend to his remaining requests, as early as practicable, at his own expense; that should such a package arrive at this late season, it would require immediate attention, and he desired the direction of the Society, remarking that if it was disposed of in accordance with the original order, he should be happy to dispense scions to the Fruit Committee, of any varieties that may prove desirable. Whereupon the following vote was passed:

Whereas, the President having given a private order for trees and scions to Mr. De Wall, and having also responded to this gentleman's orders at his own expense—therefore,

Voted, That should such a package arrive from Mr. De Wall, that the President be authorized to take it to his own account, dispensing, as he has liberally offered, scions to the Fruit Committee, of such as may prove desirable.

Letters acknowledging the receipt of the notice of their election as corresponding members of the society, were received from the following gentlemen:

George B. Emerson, Boston; Prof. Asa Gray, Cambridge; Prof. E. N. Horsford, Cambridge; J. B. Russell, Cincinnati; Luther Tucker, Albany; Wm. D. Brinckle, M. D., Philadelphia.

Voted, That the thanks of the Society be presented to Geo. B. Emerson, Esq., for a copy of his "Report upon the Trees and Shrubs growing naturally in the forests of Massachusetts."

Voted, That the thanks of the Society be presented to J. B. Russell, Esq., of Cincinnati, for Packages of new seed, from the Rocky Mountains, and that the seed be placed in the hands of the Committee on Flowers for distribution.

Voted, That the thanks of the Society be presented to R. Buist, Esq., of Philadelphia, for a copy of the 2nd edition of his Manual upon the culture of the Rose.

A communication was received from William R. Smith, Esq., of Macedon, New-York, accompanied with scions of the following varieties of fruits. Red Canada and Early Joe Apples; and Onondaga and Osband's Summer Pears.

Voted, That the thanks of the Society be presented to Wm. R. Smith, Esq., and that the scions be placed in the hands of the Committee of Fruits for distribution, and that the Recording Secretary be requested to register the names of such members as may receive the same.

Voted, That the *twentieth* section of the by-laws of the Society, be amended by striking out all after the word "them" in the twenty-second line, to the end of the section.

April 10, 1847.—President WILDER in the chair.

Voted, That in consequence of the intention of this Society to publish its transactions, the materials of the Society will in future be wanted for its own work, and will not be allowed to be used for any other publication.

The scions received from William R. Smith, Esq., of New-York, were distributed to the members of the Society.

A communication was received from A. H. Ernst, Esq., of Cincinnati, a corresponding member of the Society, accompanied with a package of scions of fourteen varieties of Apples, and one of Pears.

Voted, That the thanks of the Society be presented to A. H. Ernst, Esq., that the communication be placed in the hands of the Committee of Publication, and the grafts in the hands of the Committee on Fruits for distribution among the members.

Voted, That the tickets for the Annual Exhibition be prepared as heretofore.

EDWARD C. K. WALKER, Rec. Sec.



THE CEDAR OF LEBANON.

*Full grown Tree at Foxley, planted by Sir Uvedale Price.
[Scale 1 in. to 12 feet.]*

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AN AMERICAN may be allowed some honest pride in the beauty and profusion of fine forest trees, natives of our western hemisphere. North America is the land of oaks, pines, and magnolias, to say nothing of the lesser genera; and the parks and gardens of all Europe, owe their choicest sylvan treasures to our native woods and hills.

But there is one tree, almost everywhere naturalized in Europe—an evergreen tree as pre-eminently grand and beautiful among evergreens, as a proud ship of the line among little coasting vessels—a historical tree, as rich in sacred and poetic association as Mount Sinai itself—a hardy tree, from a region of mountain snows, which bears the winter of the middle States; and yet, notwithstanding all these unrivalled claims to attention, we believe there are not at this moment a dozen good specimens of it, twenty feet high, in the United States.

We mean, of course, that world-renowned tree, the CEDAR OF LEBANON: that tree which was the favorite of the wisest of kings; the wood of which kindled the burnt offerings of the Israelites in the time of Moses; of which was built the temple of Solomon, and which the Prophet EZEKIEL so finely used as a simile in describing a great empire;—"Be-

hold the Assyrian was a Cedar in Lebanon, with fair branches, and with a shadowing shroud, and of a high stature; and his top was among the thick boughs. His boughs were multiplied, and his branches became long. The fir trees were not like his boughs, nor the chestnut trees like his branches, nor any tree in the garden of God like unto him in beauty."

The original forests of this tree upon Mount Lebanon, must have been truly vast, as Solomon's "forty thousand hewers" were employed there in cutting the timber used in building the temple. It is indeed most probable that they never recovered or were renewed afterwards, since modern travellers give accounts of their gradual disappearance. Such however is the great age and longevity of this tree, that it is highly credible that the few existing old specimens on Mount Lebanon, are remnants of the ancient forest. LAMARTINE, who made a voyage to the Holy Land, and visited these trees in 1832, gives the following account of them:

"We alighted and sat down under a rock to contemplate them. These trees are the most renowned natural monuments in the universe; religion, poetry, and history, have

all equally celebrated them. The Arabs of all sects entertain a traditional veneration for these trees. They attribute to them not only a vegetative power, which enables them to live eternally, but also an intelligence, which causes them to manifest signs of wisdom and foresight, similar to those of instinct and reason in man. They are said to understand the changes of seasons; they stir their vast branches as if they were limbs; they spread out and contract their boughs, inclining them towards heaven, or towards earth, according as the snow prepares to fall or to melt. These trees diminish in every succeeding age. Travellers formerly counted 30 or 40; more recently 17; more recently still only 12; there are now but 7. These however, from their size and general appearance, may be fairly presumed to have existed in biblical times. Around these ancient witnesses of ages long since past, there still remains a grove of yellow-cedars, appearing to me to form a group of 400 or 500 trees or shrubs. Every year, in the month of June, the inhabitants of Beshcheria, of Eden, of Kanobin, and the other neighboring valleys and villages, clamber up to these cedars, and celebrate mass at their feet. How many prayers have resounded under these branches; and what more beautiful canopy for worship can exist!"

The trunks of the largest of these venerable trees, measure from 30 to 40 feet in circumference. The finest and most numerous Cedars of Lebanon in the world, at the present moment, however, are in Great Britain. A people so fond of park scenery as the English, could not but be early impressed with the magnificence of this oriental cedar. It was accordingly introduced into England as early as 1683, and the two oldest trees on record there, are said to have

been planted by QUEEN ELIZABETH. The DUKE OF RICHMOND of the year 1761, planted 1000 young Cedars of Lebanon; and nearly all the larger estates in England boast their noble specimens of this tree at the present day. The tallest specimen in England, is that at *Strathfieldsaye*, the seat of the DUKE OF WELLINGTON, which is 108 feet high. Woburn Abbey boasts also many superb specimens, varying from 60 to 90 feet high, *nine* of which measure from 4 to 6 feet each in the diameter of their trunks. But the largest, and, according to LOUDON, unquestionably the handsomest cedar in Eng-

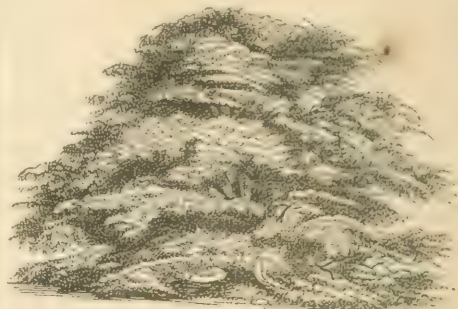


Fig. 117. *The Syon Cedar.*

land, is the magnificent specimen at *Syon House*, the seat of the DUKE OF NORTHUMBRLAND. This tree is 72 feet high, the diameter of its head 117 feet, and of the trunk 8 feet. We give a miniature engraving of this tree (fig. 117,) from the *Arboretum Britannicum*, and also of the tree at *Foxley*, planted by SIR UVEDALE PRICE, (see *Frontispiece*), which is 50 feet high, with a trunk measuring 4 feet in diameter.

The finest specimen of this evergreen in the United States, is that upon the grounds of THOMAS ASH, Esq., at *Throg's Neck*, Westchester county, N. Y. We made a hasty sketch of this tree in 1845, of which the annexed engraving is a miniature. (Fig. 118.) It is about 50 feet high, and has, we learn, been planted over 40 years.

It is a striking and beautiful tree, but has as yet by no means attained the grandeur and dignity which a few more years will give it. Still it is a very fine tree, and no one can look upon it without being inspired with a desire to plant Cedars of Lebanon.



Fig. 118. Cedar of Lebanon, at Mr. Ash's, near New-York.

The most remarkable peculiarity in the Cedar of Lebanon, is the *horizontal* disposition of its wide spreading branches. This is not apparent in very young trees, but soon becomes so as they begin to develop large heads. Though in altitude this tree is exceeded by some of the pines lately discovered in Oregon, which reach truly gigantic heights, yet in *breadth* and *massiveness* it far exceeds all other evergreen trees, and when old and finely developed on every side, is not equalled in an ornamental point of view, by any sylvan tree of temperate regions.

Its character being essentially grand and magnificent, it therefore should only be planted where there is sufficient room for its development on every side. Crowded among other trees, all its fine breadth and massiveness is lost, and it is drawn up with a narrow head like any other of the pine family. But planted in the midst of a broad lawn, it will eventually form a sublime object, far more impressive and mag-

nificent than most of the country houses which belong to the private life of a republic.

The Cedar of Lebanon grows in almost every soil, from the poorest gravel to the richest loam. It has been remarked in England that its growth is most rapid in localities where, though planted in a good dry soil, its roots can reach water—such as situations near the margins of ponds or springs. In general, its average growth in this country in favorable soils is about a foot in a year; and when the soil is very deeply trenched before planting, or when its roots are not stinted in the supply of moisture during the summer, it frequently advances with double that rapidity.

Although hardy here, we understand in New-England it requires slight protection in winter, while the trees are yet small. The shelter afforded by sticking a few branches of evergreens in the ground around it, will fully answer this purpose. Wherever the Isabella grape matures fully in the open air, it may be cultivated successfully. The few plants that are offered for sale by the nurserymen in this country, are imported from England in pots, but there is no reason why they should not be raised here from seeds, and sold in larger quantities at a reduced price. The seeds vegetate freely, even when three or four years old, and the cones containing them may be easily obtained of the London seedsmen.*

The *cone* of the Cedar of Lebanon, (of which fig. 119 is a reduced drawing,) is about 4 inches long, and is beautifully formed.

* Mr. Ash presented us with some cones from his tree in 1844, the seeds from which we planted and they vegetated very readily. They should be sown in the autumn, in light, rich soil, in broad flat boxes about four inches deep. These should be placed in a cellar till spring, and then kept during the summer following in a cool and rather shaded situation—the next winter in a cellar or cold pit, and the succeeding spring they may be transplanted into the nursery.

The spring is the better season for planting the Cedar of Lebanon in this climate.



Fig. 119. Branch and cone of the Cedar of Lebanon. one-sixth of the natural size.

When the small trees are grown in pots, there is no difficulty in transporting them to any distance, and as the months of September and October are the best for importing them from England, we trust our leading nurserymen who are now importing thousands of fruit trees from London and Paris annually, will provide

a sufficient stock of this most desirable evergreen for the spring sales of 1848. If the Cedar of Lebanon does not become a popular tree with all intelligent planters in this country, who have space enough to allow it to show its beauties, and a climate not too inclement for its growth, then we have greatly overrated the taste of those engaged in rural improvements at the present moment, in the United States. The only reason why this grandest and most interesting of all evergreen trees, which may be grown in this country as easily as the hemlock, wherever the peach bears well, has not already been extensively planted, is owing to two causes. First: that its merits and its adaptation to our soil and climate, are not generally known; and second, that it has as yet, without any sufficient reason, been difficult to procure it, even in our largest nurseries. We trust that our remarks may have the effect of inspiring many with an appreciation of its great charms, and that our energetic nurserymen, well knowing that there

are thousands of young trees to be had in England, which may be imported in autumn, from one to three feet high, and in pots, in perfect condition, will be able in future to supply all orders for Cedars of Lebanon.

While we are upon the subject of evergreen trees, we will briefly call the attention of our readers to another rare coniferous species, which is likely to prove a very interesting addition to our hardy arbore-tums.

This is the CHILI PINE, *Araucaria imbricata*, a singular and noble evergreen from the Cordilleras mountains, in South America, where it attains the height of 150 feet.

This pine, commonly known as the *Araucaria*,) from *Araucanos*, the name of the Chilian tribe in whose country it grows,) is distinguished by its scale-like foliage, closely over-laid or imbricated, its horizontal branches springing out from the trunk in whorls or circles, and its immense globular cone, or fruit, as large as a man's head, containing numerous nutritious and excellent nuts. A single fruit contains between 200 and 300 of these kernels, which Dr. PÆFFIG informs us, supply the place of both the palm and corn to the Indians of the Chilian Andes. "As there are frequently 20 or 30 fruits on a stem, and as even a hearty eater among the Indians, except he should be wholly deprived of every other kind of sustenance, cannot consume more than 200 nuts in a day, it is obvious that 18 *Araucaria* trees will maintain a single person for a whole year." The kernel is of the shape of an almond, but twice as large, and is eaten either fresh, boiled, or roasted; and for winter's use, the women prepare a kind of pastry from them.*

We borrow from the *Arboretum Britannicum*, an engraving, one-sixth of the size

* *Arboretum Britannicum*, p. 2438.

of nature, showing the young branch and leaves, (fig. 120) and also another (fig. 121,) which is a portrait of a specimen growing

the least protection ; it stands in rather an exposed situation, on a raised mound, in which the tree delights. The soil is loam, with a small portion of poor peat, and the plant has never been watered, even in the hottest season we have had. A wet sub-soil is certain death to the *Araucaria* in



Fig. 120. Branch of the *Araucaria*, or *Chili Pine*, one-sixth of the natural size.



Fig. 121. The *Chili Pine*, or *Araucaria* tree.

at Kew Garden, England, taken in 1838, when it was only 12 feet high. We also add from the London Horticultural Magazine, the following memorandum respecting a tree at *Dropmore*, taken last summer, (1846.)

"The following is the height and dimensions of the finest specimen we have of this noble tree, and probably the largest in Europe ; height 22 feet 6 inches ; diameter of the spread of branches near the ground, 10 feet 6 inches ; girth of the stem near the ground, 2 feet 10 inches ; five feet above the ground, 2 feet. The tree has made a rapid growth this season, and promises to get a foot higher, or more, before autumn ; it is about 16 years old, and has never had

very wet seasons. A plant here, from a cutting, made a leading shoot in the year 1833, and is now 19 feet 6 inches in height, and has every appearance of making a splendid plant."

In Scotland, also, it stands without the slightest protection, and we have before us, in the *Revue Horticole*, an account of a plantation of these trees at Brest, in the north of France, a climate very much like our own. The soil is a light sandy loam, poor and thin. Yet the trees, fully exposed, or sheltered only by a small belt of pines, have proved perfectly hardy, resisting without injury, even the rigorous winter of 1829-30, when the thermometer was several degrees below zero of Fahrenheit. "The largest

now measures about 20 feet in height. Its circles or tiers of branches, are five in number, disposed at perfectly equal distances, and closely resembling, in effect, a magnificent pyramid. The stem, the branches, and their shoots are all completely clothed with leaves of a fine deep green; these leaves are regularly and symmetrically disposed, and are remarkable in their being bent backwards at their extremities, giving the effect, as well as the form, of the antique girandole."

Mr. BUIST, the well known Philadelphia nurseryman, who has already distributed a good many specimens of this tree in the

United States, informed us last season, that it is entirely hardy in Philadelphia, and our correspondent, Dr. VALK, of Flushing, who has in his garden a specimen 3 feet high, writes us that it has borne the past winter without protection, and apparently uninjured.

We may therefore reasonably hope that this unique South American tree, of most singular foliage, striking symmetry, and gigantic eatable fruit, will also take its place in our ornamental plantations, along with the Cedar of Lebanon and the Deodar Cedar, two of the grandest trees of the Asian world.

TREATMENT OF ESPALIERS.

BY SAMUEL G. PERKINS, BOSTON.

MANUFACTURING fruit-buds on espaliers, in July and September, to create *bouquets*, or fruit-spurs, close to the lateral trained branches, is an important point in the pruning of this description of trees.

Every one knows that espaliers, or trees trained on trellises or walls, will produce quantities of suckers or wood-shoots, [robbers,] from the sides of their leading branches in proportion to the angle that is given the latter by the gardener, or person who trains them; those branches that are perfectly or nearly horizontal, producing more than those that are elevated to an angle of forty-five degrees, more or less.

On pears trained on the horizontal or Forsyth principle, constant care must be taken to suppress those robbers by continually pinching them at the ends, after they become a little hard or woody, until the middle of July, when the first regular pruning or dressing of that year must commence.

This dressing, or summer pruning, if properly performed, will not only prevent these wood-shoots or robbers from taking away a great deal of sap that is wanted for the fruit, and for extending or elongating the main or lateral branches, but also that portion which is wanted for the swelling and maturity of the buds that are seated at the base of these robbers or false shoots, and which are properly situated to produce the best fruit-buds.

Thus if you cut-in, or shorten, all the robbers on the branches, so far as you may want them for fruit, you will throw the sap back on to these buds and increase their size and mature them in some degree for their future destination.

These side shoots in question should be shortened, at the July pruning, down to within four or eight inches of the branch out of which they spring, according to their strength, so as to leave them furnished with

leaves enough to carry on the elaboration of the sap that is wanted to perfect these fruit-buds or spurs.

But while you are preparing to create new spurs to produce fruit, you must cut out those that have already borne fruit to any great extent, and not allow even the most vigorous to be crowded, or left to grow too near to each other, as your fruit will depend on the judgment used in this respect, for its size, beauty and quality.

About the middle of September, when the sap has ceased, in a good measure, to move with effect, all the shoots that you have cut-in or shortened in July, must be cut off down to the buds or fruit-spurs that are already formed near the base of the shoots, which have been thus prepared, in order that they may have all the benefit of the remaining heat of the season to perfect juices, and by its elaborating process to qualify these buds to produce fruit.

If this work be done neatly, the tree will show itself to great advantage the following season, and so on in continuation from year to year, as long as it is well attended to, and will supply you with abundance of the best and handsomest fruit.

But, if your espalier is allowed to run wild, or is carelessly pruned, it will be almost always an unpleasant object and an unprofitable member of your pomonal family.

The foregoing is the manner which I have practiced on my trees, trained on the *Forsyth principle*; [on trees treated according to the French rule a different course is necessary.]

Of the latter of these methods I shall now speak only so far as becomes necessary in explaining my mode of uniting on the same wall, by alternately planing and training trees on the French and English modes,

within eight or ten feet of each other, without interfering.

I have now more than one half of a mile of wall, fence, and open trellis, on which trees are trained, including the youngest trees pruned for this mode of culture up to those that have attained their full height and width.

The *Forsyth* trees of large size, are planted from sixteen to eighteen feet apart, and in the centre between them there are trees trained on the *French* principle, with a view to fill up the whole space on the trellis, from bottom to top, in the shortest time possible.

Now as it is best to create only three branches annually on your *Forsyth* trees, with a view to have your tree fruited from bottom to top; viz., two laterals and the one leader or upright, it takes a number of years to complete a tree on this principle, even to the height of eight feet only, for a foot or fifteen inches is the greatest distance allowed between the branches of trees on which the largest sized pears are raised, and eight to ten inches for the smaller sized pears; the lowest branches being within a foot or ten inches of the ground.

A tree therefore that has seven or eight branches in height, will be seven or eight years old as a wall-tree or espalier. These lateral branches must not be trained exactly level on the wall or trellis, but they should be a little elevated, so as to have the end of the branch a little higher than the base or insertion, in order that when it has attained its full length of eight or nine feet, it may be three or four inches higher at the end than at the base.

The trees trained on the French principle, that is on two main branches elevated to an angle of about 45° , will grow so much faster than the *Forsyth*, that they will be at the top of the wall, before the others are

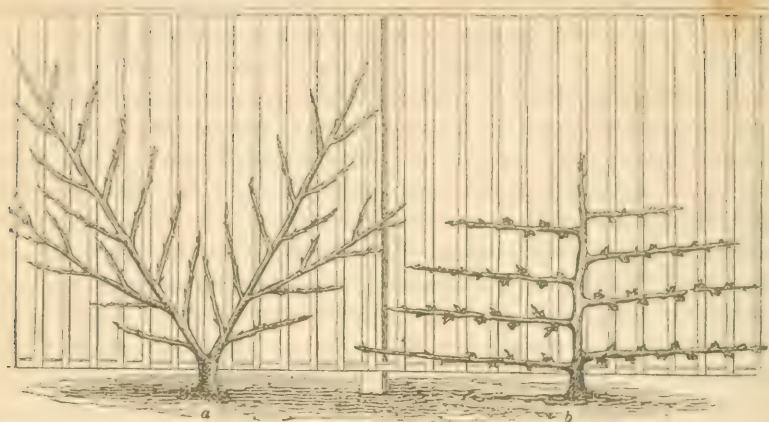


FIG. 122. *Espalier Training, showing the trellis half filled. a, the French mode; b, the Forsyth mode.*

half way up. They are to be treated as “riders,” and to be made to cover all the naked part of the wall or trellis, until overtaken by the Forsyths, as they slowly advance to their growth. The French trees should be set off from the wall or trellis sufficiently, so that the Forsyth branches may pass behind their stems as they extend laterally, and thus the wall will be completely filled with fruit in the course of time.

The mode of *pruning* these trees is altogether different from that practiced on the *Forsyth* trained trees to create fruit-bearing shoots, and by the time these last have attained their full growth, the *French* trained

will have disappeared altogether, as their branches have been successively cut off as their horizontal-trained neighbors encroached upon them.

At this state of the trees, when the *Forsyths* will have the whole wall to themselves, and when they have attained the utmost height that you wish, say eight or ten feet, and the sets of lateral branches are completely formed, the upright leading shoot should be cut out, so that the laterals may receive the additional sap, which has hitherto been consumed by the leading shoot.

SAML. G. PERKINS.

Brookline, near Boston, May 6. 1847.

VITALITY IN SEEDS AND PLANTS.

BY T. S. HUMRICKHOUSE, COSHOCTON, OHIO.

How far *analogy* may be depended upon, for aid or guidance in our researches into the hidden, or the unknown, of the vast field of nature, is a point requiring to be settled. How far it is allowable to go, and where it may be necessary to stop, with this mode of reasoning, needs to be defined.

It will not be disputed, on the one hand, that analogy is good as between similar things; and it is not denied, on the other, that it is bad as between things dissimilar. Analogy would fail us were we to attempt to reason by it from mind to matter, or from matter to mind. It will not hold, or but re-

motely, between animate and inanimate nature. But, in the same order of being, to reason from a kind or kinds to other kind or kinds, is not only allowable, but is always a good, and often the best and surest mode we can adopt.

Thus, if it be alleged, as it has been, that continuous seminal reproduction engenders feebleness and greater feebleness the oftener repeated, in trees; this, as long as it may be regarded as a mere hypothesis, may be well combatted by analogies drawn from other things in the vegetable, and I think also, in the animal kingdoms. But, if it should be once established, by unmistakable *facts* and conclusive experiments, to be *true*; then, analogy must give place to these facts, however it may be opposed to them.

These remarks have been suggested by the article of MR. BEECHER, republished in the October No. of the Horticulturist. I do not, however, understand Mr. B. as rejecting analogy entirely from pomological investigations. Such is neither the main object nor general drift of his argument. There are other things in it requiring to be noticed, as some extracts I shall make, together with a few comments upon them, are designed to show.

"A seed is a bud prepared for one set of circumstances, and a bud is a seed prepared for another set of circumstances—it is the same embryo in different garments. The seed has been called, therefore, a 'primary bud,' the difference being one of *condition*, and not of *nature*.

"It is manifest, then, that the plant which springs from a bud is as really a new plant, as that which springs from the seed; and it is equally true, that a seed may convey the weakness and disease of its parent, with as much facility as a bud or graft does. If

the feebleness of a tree is general, its functions languid, its secretions thin, then a bud or graft will be feeble,—and so would be its seed; or if a tree be thoroughly tainted with disease, the buds would not escape, nor the trees springing from them—neither would its seed, or a tree springing from it. A tree from a *bud* of the Doyenne pear is just as much a new tree as one from its *seed*."

We may agree with his main conclusion, without adopting *all* the reasoning by which he arrives at it. In the case of trees, when a variety is once produced and exists, we may believe that it is capable of being continued forever, by means of the bud or scion, or indeed without them, if the first individual can be guarded against all the causes of disease and decay. But the reason must be, that this is an *exception*, to which the analogies of vegetable nature, out of the particular kind, do not reach, and which is, therefore, *sue naturæ*.

In defining the difference between a seed and a bud, as "being one of *condition* and not of *nature*," he mystifies the subject. When it is said that the difference is one of "*condition*," natural "*condition*" must be intended; and to add to that, "and not of *nature*," is absurd and contradictory; for, how can the difference in "*condition*" be produced, except in conformity with the law of nature and by some of its processes.

Does not the unrestricted argument prove more than he intends? If it be true, that a bud is but a germ like a seed, only produced by a different development and subject to different laws; and that, like a seed, it is capable of producing a new individual, and more than a mere elongation of the being of the tree from which it is taken; and, if it be true that, by its natural constitution, even while it remains upon the parent, it grows upon the tree as a seed in the

ground, only its connection with the soil, (which is as necessary to it for its nourishment as to the seed,) is through the tree by infinitely nice organizations, instead of communicating directly with it, as is the case with the seed: then it follows, from the last branch of the proposition, that all the buds upon a tree are at most but *annuals*; for they grow but for *one* season, or until they have formed upon them other buds, which, according to the first branch of the proposition, being other individuals, and once beginning to grow, take the place of the former, whose period of duration, therefore, is already past, and the wood and bark made by them during their period, as well as all preceding growths, can, for the future, only serve the purpose of a staff and medium for the latter, which now, and until their course is in like manner terminated, have their connection through them and by their aid with the earth. This, though it seems to be refining too much, yet appears to me to be the legitimate consequence of the reasoning when fully carried out.

That can not be a good argument which, setting out to maintain that *a tree lives forever*, ends in proving that it is rather a "*community of plants*," and that the individual plants are at most but *annuals*.

There are innumerable facts, within the every-day knowledge and experience of woodsmen practically acquainted with our forests, which go to show, that "*the trunk*" of a tree, or wood of previous years, is more than what MR. BEECHER calls "a common support for the united roots emitted by the buds, and upon which they go down into the earth," &c., according to his view. There is a marked and well known difference between the green or living, and the dead wood of a tree. All the living wood in the trunk of a tree is one vast *artery*,

through which the ascending sap is conveyed to the branches, by a force similar to, if it be not the very same, with that of *capillary attraction*. And the branches are so many other smaller arteries, proceeding from the trunk, by which the sap is further conveyed to the extremities and to the buds and leaves. Whilst it remains in these latter, a portion not required is thrown off, and another necessary portion is inhaled or imbibed, and added from the air, and the food thus elaborated, is returned on the *outside* of the previous year's wood, and being diffused over the *whole thereof*, is hardened into a new growth of wood and bark—that next the former year's wood being wood, and that next the former year's bark being bark. Thus the tree grows or is increased in size. And the pith or heart at the centre of the tree, as well as its bark on the outside, have also their appropriate functions—one function of the bark being first to absorb and then to exhale or evaporate the watery portion of the returned sap, in which the materials for the woody fibre have been till now held in solution, but which, being taken up and exhaled or evaporated through the bark, the hardening of the returned sap into wood is thus, little by little, or gradually during the growing season, accomplished. In confirmation of all which I need only cite, that, for the making of maple sugar, the tree is bored into the wood, and the sugar-water is obtained from the wood, and is no other than the ascending sap in its first or rudest adaptation: and that, in girdling a sugar maple and many other kinds of trees, as gum, buckeye, lime, beech, sycamore, white elm, &c., although a chip be taken out six inches long and one or even two inches thick all round the tree, it is often the third year after before it will die; and, throughout the first and often the

second season, the young twigs and the leaves are as fresh as ever. Such could not be the case, if the trunk and old wood are no more than a "common support" for the "emitted roots" of the "community of plants, which," according to his theory, "uniting together, go down upon it into the earth, and are there put in connection with appropriate food." After the girdling, by which *all* the "emitted roots" of the so called "community of plants" are cut off, and their "connection with appropriate food in the soil," entirely interrupted and taken away, *whence* does the said "community" obtain its supply for one, two or three years? This is a question for those who advance this theory, and for those who endorse it, to solve and to answer. To me it appears that the supply still continues to be conducted upward to the branches through the trunk; but, that the tree in the end dies, in consequence of the interruption of the returned elaborated sap, which can not now be diffused upon the outside of the wood of former years in the roots;—the growth of which is thus entirely stopped, though they are capable of surviving such stoppage for a time.

I take it that the whole tree is but *one organized body*; and that the stem, pith, wood, bark, roots, branches, buds and leaves are but *parts* of the same *whole*; *endowed, nevertheless, with certain capacities for continuing the species other than by seed alone.*

In like manner, is it not affirming too much for his argument, when he says, that when the stock is once diseased, so also will be all the trees grown from scions or buds taken from it: and that this extends even to the seed, which, deriving its vitality from the parent, necessarily inherits all the infirmities of the parent and transmits them

to its offspring, and so from offspring to offspring downward through all derivatives. It can not be: else, it would establish the *degeneracy* of plants; and, by analogy, of all living creatures, animal as well as vegetable, the continuation of which is provided for by the same modes. And this degeneracy would, moreover, be progressive; for, every advance towards it would be fixed and could never be retraced; and what is there that escapes—what is there that is not affected by disease at some period of its existence?

Before pursuing this matter further, I will make one or two extracts from the "Fruits and Fruit Trees of America," to which what remains to be said will equally apply. The following is from page 7:

"It will be remembered that it is a leading feature in this theory," (the theory of the celebrated Belgian pomologist VAN MONS,) "that, in order to improve the fruit, we must *subdue or enfeeble* the original coarse luxuriance of the tree. Keeping this in mind, DR. VAN MONS always gathers his fruit before fully ripe, and allows them to rot before planting the seeds, in order to refine or render less wild and harsh the next generation. In transplanting the young seedlings into quarters to bear, he cuts off the tap root, and he annually shortens the leading and side branches, besides planting them only a few feet apart. All this lessens the vigor of the trees, and produces an impression upon the nature of the seeds which will be produced by their first fruit; and, in order to continue in full force the progressive variation, he allows his seedlings to bear on their own roots."

How any or all of these appliances, brought to bear upon the production of a given seed, can "produce an impression upon the nature of that seed," so as to

change it, and as it were compel it to give birth to a variety in any way different from what it would have been without them, is to my mind utterly inconceivable, and altogether too mysterious to be received without examination. Is not all this refining process a thousand times gone through with in trees, as they spring up in a state of unaided nature? In the natural state, does not the fruit frequently fall off, from the young trees as well as the old, and before as well as after it is fully matured? Does it not always rot before the seeds find their fit receptacle in the soil in order to their germinating? And if these things have any influence "to refine or render less wild and harsh the next generation," is it never attained in the natural way? Do they not often spring up in thickets? Are not their roots often stunted by a poor soil? Are not the "leading and side branches" often cropped by animals, and broken off by innumerable accidents to which they are subject? And if so, has not all this the same tendency to "lessen the vigor of the trees,"—which appears to be the sole end and aim to be accomplished,—as effectually, happening thus in a state of nature, as if it were designedly performed by the hand of the most skilful operator under garden culture?

The following is from page 557 :

"The hardihood of any variety depends greatly upon the circumstances of its origin. When a new variety springs up accidentally from a healthy seed in a semi-natural manner, like the Seckel, the Dix, and other native sorts, it will usually prove the hardiest. It is, as it were, an effort of nature to produce a new individual out of the materials, in a progressive state, which garden culture has afforded."

In this extract, the expressions "semi-

natural manner," and "materials, in a progressive state, which garden culture has afforded," appear to convey no very definite idea. No one, I imagine, will suppose, that, had *the* seed that produced the Dix, which sprang up in a chance place without culture in the manner with which all are familiar, been taken to the garden of Mr. Downing at Newburgh, and been by him there planted and reared into a tree under his most approved culture, it would have produced a variety *less hardy* or in any way different from the one that was produced by it in the manner it did grow. Such a belief would be exceedingly unphilosophical.

A seed, though it may be imperfectly developed, yet, if it is not destroyed, if its vitality remains, if it grows, yea in the very act of beginning to grow, it *overcomes*, it *throws off*, it *frees itself forever* from all the weakness, all the disease, and all the imperfection, if there were any, derived from the parent. For what is the seed? The principle of vitality in it we can not indeed comprehend. But we see it, or rather its effects—we realize it—and if *it* is not destroyed so that it but begins to grow, all the rest that is contained within the husk of the seed is only the *nourishment* provided by the Creator, by which the *new being*, in its first vital efforts, is to be sustained for a time, and until it is capable of drawing its support from the soil and from the air. And whatever may have been the disease or infirmity of the parent—whatever may have been the imperfection of the seed—it is only in the amount and adaptation of the nourishment it can supply that it is impaired. If it is incapable of supplying any nourishment whatever, then, vitality in that seed is gone. But, if it is capable of supplying it in any quantity so as to prolong life until it can reach the other sources provided for it by

the Creator in the soil and in the air; then, whenever it begins to grow, though it may be compelled to struggle against an insufficient supply of food for a time, yet, overcoming this, should it be able to overcome it, it is a *perfect* plant, and in all respects identically the same, and having *all* the very same characteristics—of *vigor*—*health*—*variety*—and other peculiarities—as fully impressed upon it as if the seed from which it sprang had been as sound and perfect as is possible.*

But what then? Are we to be indifferent in the selection of seeds, and make use of any that may fall in our way, whether per-

fect or imperfect, indiscriminately? By no means. Let us raise no starvelings. Let us take care to feed the trees we are rearing up as we would our children—beginning with the *seed*, and continuing through all the stages of subsequent growth. Not with delicacies; not with stimulants; but with plain, wholesome and nutritious diet. Let us give them a suitable *soil*, and *climate*, and *management*; for, should disease overtake them; should their native vigor become impaired, we may rest assured that its inception will be found in some of these.

T. S. H.

Coshocton, Ohio, April, 1847.

PEACH BUDS WINTER KILLED.

BY GEORGE BARTLETT, SMITHFIELD, R. I.

WHEN the mercury falls to 14° below zero, the peach buds are generally killed.

This temperature is much more common in low situations, than in elevated ones in the same vicinity.

Consequently, in northern latitudes, in localities subject to this degree of cold, peaches will more generally bear fruit on hills than in valleys.

The principal evidence on which the first of these statements is made, is the testimony of Mr. OSBORNE of this town. He is an amateur cultivator of fruit, a gentleman of great intelligence, and imbued with a Baconian reverence for facts; a quality very rare in

the world, and especially among agricultural writers. In the year 1820, Mr. OSBORNE was engaged in setting some young peach trees in his garden, when he was told by a very observing old farmer, that the peach buds were killed by the extreme cold of winter. Mr. OSBORNE manifested some incredulity in regard to the matter, when he was urged by the quiet old observer to try it. "After a very cold snap," said he, "cut open the blossom buds, and you will find a black speck in the middle, and in the spring you will see that the buds will not blossom." Since that time Mr. OSBORNE has made the observations every year, and has found this to be invariably the case. There have been several summers during this period, in which the peach trees in his garden have borne no fruit, and in the winter preceding each one of these summers, the mercury was depressed to 12 or 14 degrees below zero. And his trees have borne every year in which this degree of

* We think our correspondent has overlooked some important facts in stating this proposition. We will mention one only—the seeds of a *peach tree*, badly diseased with the *yellow*s, will, nine times out of ten, produce young trees in which also the *yellow*s appears, even if the seeds are taken away and planted distant from all diseased trees. Sometimes the disease shows itself at once, sometimes not till a year or two has elapsed. But so well is the fact known, that nurserymen, living in districts where the *yellow*s is prevalent, send to some district where this disease is not known for the stones to produce their peach stocks.—ED.

cold has not been experienced. In the winter of 1841, the writer of this, then in Illinois, observed the peach buds repeatedly, and found them green throughout. One still morning, the thermometer stood 18° below the zero of Fahrenheit. In a few days I examined them again, and found the fatal "blackness in their bosoms."

Since writing thus far, I have observed in the April number of the Horticulturist the article of J. J. THOMAS, of Macedon, on the same subject. But I thought it best to give you the additional facts which I have; as a general knowledge of observations already made, will be the best guide to direct us in our future investigations.

Marietta, Ohio, lies low on the Ohio river, latitude $39^{\circ} 25'$. In February, 1835, the thermometer indicated -18° . "The coldest since 1818, when it was the same. The effect on the peach trees was similar, but not so general. In 1818 it killed the whole of whatever age, while in 1835, the old trees only were killed."

The degree of cold necessary to kill the trees remains to be ascertained.

The winter of 1836-7, was almost unparalleled in intensity of cold. At Dartmouth, N. H. the mercury fell to -32° , at Dover to -18° , at Albany, N. Y. to -16° , at Cambridge to -32° , at Cherry-Valley to -30° , at Dutchess to -20° , at Hamilton to -28° , and observations were published at thirteen other places in N. Y., where it was more than 14° below zero. In the spring of 1837, a writer at Cambridge remarks, in regard to the cold winter: "In the northeastern States many peach trees were killed, but few produced any blossoms, and such as did blossom were so chilled by the frost that they flowered later than the cherry trees."

The published tables of meteorological

observations show that the latitude of general successful peach culture, usually escapes the temperature of -14° . In Lambertville, N. J., latitude $40^{\circ} 23'$, the coldest weather in 1839, was $+1^{\circ}$, in 1840 -6° , in 1841 $+0\frac{3}{4}^{\circ}$, in 1842 $+10^{\circ}$, in 1843 $+4\frac{1}{2}^{\circ}$, in 1844 $+0\frac{1}{4}^{\circ}$, in 1845 $+3^{\circ}$, in 1846 $+1^{\circ}$. In Steubenville, Ohio, latitude $40^{\circ} 25'$, the coldest weather, from 1833 to 1845, was -12° , and this temperature was experienced but once.

While in latitudes in which the peach generally fails, the mercury is frequently depressed to -14° . In Dover, N. H., latitude $43^{\circ} 13'$, the greatest cold in 1835 was -28° , in 1836 -17° , in 1837 -18° , in 1838 -12° , in 1839 -14° , in 1840 -14° , in 1841 -16° , in 1842 -8° . In Blomington, Iowa, in 1840 -25° , in 1841 -23° , in 1842 -21° , in 1843 -19° , in 1844 -6° , in 1845 -12° .

The belt of country lying between latitudes 40° and 43° occasionally experiences this degree of cold, and the experience of your readers living in these latitudes, will probably testify that there is a corresponding uncertainty in the fruitfulness of the peach.

MR. THOMAS' article, together with the observations of the editor of the Horticulturist, makes it less necessary to enlarge in proof of the statement that this temperature more frequently occurs in valleys than on hills. In this immediate vicinity observations have been made with thermometers at three different elevations for several years. *And on all extremely cold nights, when there is no wind, the lowest thermometer shows the lowest temperature, the highest one the highest temperature, and at the intermediate one in elevation, the temperature is between the other two.* At one time during the past winter the thermometer in the valley marked

—18°, while the next one in height, about a mile distant, showed a temperature of —6°.

Several years since, two brothers in Cumberland in this State, one living near the bottom of a high hill, and the other near the top of the same hill, bought each of them a thermometer; and their observations caused the one in the valley to apply the epithet of *lazy* to his brother's thermometer. He said it could not get up so high, nor down so low, as his own could.

The writer of this has three peach orchards, at three different elevations; and this winter, after the mercury at the house fell to —6°, I examined the buds, cutting some fifty in each orchard. The lowest orchard is thirty or forty feet lower than the house, and in this nine-tenths of the buds were killed. In the one at the same elevation as the thermometer, and in one thirty or forty feet higher, just one-fourth of the buds were dead. A portion of the buds will generally be found to be dead, when examined in any winter.

The mode of examining is to cut the bud transversely directly through the middle, when if it is dead, the black speck will be seen. From observations with the naked eye, I think the ovary merely is killed, though occasionally the whole flower is evi-

dently dead, including the stamens and pistils.

No doubt other circumstances besides elevation, have an important influence on temperature. Among these are proximity to the sea, and the shelter of large cities. The American Almanac, has records of observations, made January 4th and 5th, 1835, at eleven places in the interior of New-York, ranging from —28° to —40°, while in New-York city the mercury stood at —6°. Observations at six places in the interior of Pennsylvania, ranging from —13° to —32°, in Philadelphia —6°, in Pittsburg —4°.

GEORGE BARTLETT.

Smith field, R. I., April 15, 1847.

[Highly interesting remarks to planters of fruit trees, to which any observing person may add an abundance of additional testimony. While we write, the peach trees in all the neighborhood around us are profusely in blossom, and promise the finest crops—with the exception of a narrow valley lying along a stream of water, a couple of miles distant. The level of this valley is not more than fifty or eighty feet below that of the country about it, yet the buds of the peach trees within it are nearly all destroyed.—ED.]

HOW TO MAKE A PARADISE IN THE COUNTRY.

[WE have been requested by a friend, to reprint in the Horticulturist, the following essay, from the inimitable pen of the author of "*Letters from under a Bridge*." There are many citizens who retire into the country, and fancy that the numberless cares of a large "country place" are only a kind of Arcadian child's play. There are many too, who do not know that all they really want in country life, are not its business and cares, but its beauty and its retirement; not a great landed estate, and great personal slavery, but a simple residence, tasteful, admirably situated, and which will, in a good degree, take care of itself. Nothing, we venture to say, has ever been written, that so exactly strikes the actual level of wants and wishes of this class of our readers, as



the spirited suggestions which follow.—
ED. HORTICULTURIST.]

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Landscape-gardening is a pleasant subject to expand into an imaginative article, and I am not surprised that men, sitting amid hot editorials in a city (the month of July,) find a certain facility in creating woods and walks, planting hedges and building conservatories. So may the brain be refreshed, I well know, even with the smell of printing ink in the nostrils. But landscape gardening, as within the reach of the small farmer people, is quite another thing, and to be managed (as brain-gardening need not be, to be sure) with economy and moderation. Tell us in the quarterlies, if you will, what a man may do with a thousand acres and plenty of money; but *we* will endeavor to show what may be done with fifty acres and a spare hour in the evening—by the tasteful farmer, or the tradesman retired on small means. These own their fifty acres (more or less,) up to the sky and down to the bottom of their “diggings,” and as nature lets the tree grow and the flower expand for man, without reference to his account at the bank, they have it in their power to embellish, and most commonly, they have also the inclination. Beginners, however, at this, as at most other things, are at the mercy of injudicious

counsel, and few books can be more expensively misapplied, than the treatises on landscape-gardening.

The most intense and sincere lovers of the country, are citizens who have fled to rural life in middle age, and old travellers who are weary, heart and foot, and long for shelter and rest. Both these classes of men are ornamental in their tastes—the first because the country is his passion, heightened by abstinence; and the latter, because he remembers the secluded and sweet spots he has crossed in travel, and yearns for something that resembles them, of his own. To begin at the beginning, I will suppose such a man as either of these, in search of land to purchase and build upon. His means are moderate.

Leaving the climate and productiveness of soil out of the question, the main things to find united, are, *shade, water, and inequality of surface*. With these three features given by nature, any spot may be made beautiful, and at very little cost; and, fortunately for purchasers in this country, most land is valued and sold with little or no reference to these or other capabilities for embellishment. Water, in a country so laced with rivers, is easily found. Yet there are hints worth giving, perhaps, obvious as they seem, even in the selection of water. A small and rapid river is preferable to a large

river or lake. The Hudson, for instance, is too broad to bridge, and beautiful as the sites are upon its banks, the residents have but one egress and one drive—the country behind them. If they could cross to the other side, and radiate in every direction in their evening drives, the villas on that noble river would be trebled in value. One soon tires of riding up and down one bank of a river, and without taste for boating, the beautiful expanse of water soon becomes an irksome barrier. Very much the same remark is true of the borders of lakes, with the additional objection, that there is no variety to the view. A small bright stream, such as hundreds of nameless ones in these beautiful northern states, spanned by bridges, at every half mile, followed always by the roads, which naturally seek the level, and winding into picturesque surprises, appearing and disappearing, continually, is in itself, an ever-renewing poem, crowded with changeable pictures, and every day tempting you to follow or trace back its bright current. Small rivers, again, insure to a degree the other two requisites—shade and inequality of surface—the interval being proportionably narrow, and backed by slopes and alluvial soil, usually producing the various nut and maple trees, which, for their fruit and sap, have been spared by the inexorable axes of the first settlers. If there is any land in the country, the price of which is raised from the supposed desirableness of the site, it is upon the lakes and larger rivers, leaving the smaller rivers, fortunately still within the scale of the people's means.

One more word as to the selection of a spot. The rivers in the United States, more than those of older countries, are variable in their quantity of water. The banks of many of the most picturesque, present, at the season of the year when we most wish it otherwise (in the sultry heats of August and September), bared rocks or beds of ooze, while the stream runs sluggishly and uninvitingly between. Those which are fed principally by springs, however, are less liable to the effects of drouth than those which are the outlets of large bodies of water; and indeed, there is great difference in rivers in this respect, depending on

the degree in which their courses are shaded, and other causes. It will be safest, consequently, to select a site in August, when the water is at the lowest, preferring, of course, a bold and high bank as a protection against freshets and flood-wood. The remotest chance of a war with water, damming against wash and floods, fills an old settler with economical alarm.

It was doubtless a "small chore" for the deluge to heave up a mound or slope a bank, but with one spade at a dollar a day, the moving of earth is a discouraging job, and in selecting a place to live, it is well to be apprized what diggings may become necessary, and how your hay and water, wood, visitors, and lumber generally, are to come and go. A man's first fancy is commonly to build on a hill; but as he lives on, year after year, he would like his house lower and lower, till, if the fairies had done it for him at each succeeding wish, he would trouble them at last to dig his cellar at the bottom. It is hard mounting a hill daily, with tired horses, and it is dangerous driving down with full bellied ones from the stable-door, and your friends deduct from the pleasure of seeing you, the inconvenience of ascending and descending. The view, for which you build high, you soon discover is not daily bread, but an occasional treat, more worth, as well as better liked, for the walk to get it, and (you have selected your site, of course, with a southern exposure) a good stiff hill at your back, nine months in the year, saves several degrees of the thermometer, and sundry chimney-tops, barn roofs, and other furniture, peripatetic in a tempest. Then your hill-road washes with the rains, and needs continual mending, and the dweller on the hill needs one more horse and two more oxen, than the dweller in the valley. One thing more. There rises a night-mist (never unwholesome from running water), which protects fruit trees from frost to a certain level above the river, at certain critical seasons, and so ends the reasons for building low.

I am supposing all along, dear reader, that you have had no experience of country life, but that sick of a number in a brick block, or (if a traveller) weary of the "perpetual flow of people," you want a patch of

the globe's surface to yourself, and room enough to scream, let off champagne-corks, or throw stones, without disturbance to your neighbor. The intense yearning for this degree of liberty has led some seekers after the pastoral rather farther into the wilderness than was necessary; and while writing on the subject of a selection of rural sites, it is worth while, perhaps, to specify the desirable degree of neighborhood.

In your own person, probably, you do not combine blacksmith, carpenter, tinman, grocer, apothecary, wet-nurse, dry-nurse, washerwoman, and doctor. Shoes and clothes can wait your convenience for mending; but the little necessities supplied by the above list of vocations are rather imperative, and they can only be ministered to in any degree of comfortable perfection, by a village of at least a thousand inhabitants. Two or three miles is far enough to send your horse to be shod, and far enough to send for doctor or washerwoman, and half the distance would be better, if there was no prospect of the extension of the village limits. But the common diameter of idle boys' rambles is a mile out of the village, and to be just beyond that is very necessary, if you care for plums and apples. The church bell should be within hearing, and it is mellowed deliciously by a mile or two of hill and dale, and your wife will probably belong to a "sewing-circle," to which it is very much for her health to walk, especially if the horse is wanted for plowing. This suggests to me another point which I had nearly overlooked.

The farmer pretends to no "gentility;" I may be permitted to say, therefore, that neighbors are a luxury, both expensive and inconvenient. The necessity you feel for society, of course, will modify very much the just-stated considerations on the subject of vicinage. He who has lived only in towns, or passed his life (as travellers do) only as a receiver of hospitality, is little aware of the difference between a country and city call, or between receiving a visit and paying one. In town, "not at home," in any of its shapes, is a great preserver of personal liberty, and gives no offence. In the country, you are "at home," *will-you, nill-you*. As a stranger paying a visit,

you choose the time most convenient to yourself, and abridge the call at pleasure. In your own house, the visitor may find you at a very inconvenient hour, stay a very inconvenient time, and as you have no liberty to deny yourself at your country door, it may (or may not, I say, according to your taste) be a considerable evil. This point should be well settled, however, before you determine your distance from a closely-settled neighborhood, for many a man would rather send his horse two miles farther to be shod than live within the convenience of "sociable neighbors." A resident in a city, by-the-way (and it is a point which should be kept in mind by the retiring metropolitan) has, properly speaking, no neighbors. He has friends, chosen or made by similarity of pursuit, congeniality of taste, or accident, which might have been left unimproved. His literal neighbors he knows by name—if they keep a brass plate, but they are contented to know as little of him, and the acquaintance ends, without offence, in the perusal of the name and number on the door. In the city you pick your friends. In the country you "take them in the lump."

True, country neighbors are almost always desirable acquaintances—simple in their habits, and pure in their morals and conversation. But this letter is addressed to men retiring from the world, who look forward to the undisturbed enjoyment of trees and fields, who expect life to be filled up with the enjoyment of dew at morn, shade at noon, and the glory of sunset and starlight, and who consider the complete repose of the articulating organs, and release from oppressive and unmeaning social observances, as the fruition of Paradise. To men who have experience or philosophy enough to have reduced life to this, I should recommend a distance of five miles from any village or any family with grown-up daughters. In my character of dollar, I may be forgiven for remarking, also, that this degree of seclusion doubles an income (by enabling a man to live on half of it), and so freeing the mind from the care of self, removes the very gravest of the obstacles to happiness. I refer to no saving which infringes on comfort. The housekeeper who caters for her own family in an unvisited

seclusion, and the housekeeper who provides for her family with an eye to the possible or probable interruption of acquaintances not friends, live at very different rates; and the latter adds one dish to the bounty of the table, perhaps, but two to its vanity. Still more in the comfort and expensiveness of dress. The natural and most blissful costume of man in summer, all told, is shirt, slippers, and pantaloons. The compulsory articles of coat, suspenders, waistcoat, and cravat (gloves would be ridiculous), are a tribute paid to the chance of visitors, as is also, probably some dollars' difference in the quality of the hat.

I say nothing of the comfort of a bad hat (one you can sit upon, or water your horse from, or bide the storm in, without remorse), nor of the luxury of having half a dozen, which you do when they are cheap, and so saving the mental burthen of retaining the geography of an article so easily mislaid. A man is a slave to anything on his person he is afraid to spoil—a slave (if he is not rich, as we are not, dear reader!) to any costly habilitment whatever. The trees nod no less graciously (it is a pleasure to be able to say,) because one's trousers are of a rational volume over the portion most tried by a sedentary man, nor because one's hat is of an equivocal shape—having served as a non-conductor between a wet log and its proprietor; but ladies do—and especially country ladies; and even if they did not, there is enough of the leaven of youth, even in philosophers, to make them unwilling to appear to positive disadvantage, and unless you are quite at your ease as to even the ridiculous shabbiness of your outer man, there is no liberty—no economical liberty, I mean—in rural life. Do not mislead yourself, dear reader! I am perfectly aware that a Spanish sombrero, a pair of large French trousers plaited over the hips, a well made English shoe, and a handsome checked shirt, form as easy a costume for the country as philosopher could desire. But I write for men who must attain the same comfort in a shirt of a perfectly independent description, trousers, oftenest, that have seen service as tights, and show a fresher dye in the seams, a hat, price twen-

ty-five cents, (by the dozen,) and shoes of a remediless capriciousness of outline.

I acknowledge that such a costume is a liberty with daylight, which should only be taken within one's own fence, and that it is a misfortune to be surprised in it by a stranger, even there. But I wish to impress upon those to whom this letter is addressed, the obligations of country neighborhood as to dress and table, and the expediency of securing the degree of liberty which may be desired, by a barrier of distance. Sociable country neighbors, as I said before, are a luxury, but they are certainly an expensive one. Judging by data within my reach, I should say that a man who could live for fifteen hundred dollars a year, within a mile of a sociable village, could have the same personal comforts at ten miles distance for half the money. He numbers, say fifteen families, in his acquaintance, and of course pays at a rate of fifty dollars a family for their gratification. Now it is a question whether you would not rather have the money in board fence or Berkshire hogs. You may like society, and yet not like it at such a high price. Or (but this would lead me to another subject) you may prefer society in a lump; and with a house full of friends in the months of June and July, live in contemplative and economical solitude the remainder of the year. And this latter plan I take the liberty to recommend, more particularly to students and authors.

Touching "grounds." The first impulses of taste are dangerous to follow, no less from their blindness to unforseen combinations, than from their expensiveness. In placing your house as far from the public road as possible (and a considerable distance from dust and intrusion, seems at first a *sine qua non*) you entail upon yourself a very costly appendage in the shape of a private road, which of course must be nicely gravelled and nicely kept. A walk or drive, within your gate, which is not hard and free from weeds, is as objectionable as an untidy white dress upon a lady, and she would be better clad in russet, your road were better covered with grass. I may as well say that a hundred yards of gravel-walk, properly "scred," weeded, and roll

ed, will cost five dollars a month—a man's labor reckoned at the present usage. Now no person for whom this letter is written, can afford to keep more than one man servant for "chores." A hundred yards of gravel-walk, therefore, employing half his time, you can easily calculate the distribution of the remainder, upon the flower-garden, kitchen garden, wood-shed, stable, and piggery. (The female "help" should *milk* if I died for it!) My own opinion is, that fifty yards from the road is far enough, and twenty a more prudent distance, though, in the latter case, an impervious screen of shrubbery along your outer fence is indispensable.

The matter of gravel-walks embraces several points of rural comfort, and, to do without them, you must have no young ladies in your acquaintance, and especially, no young gentlemen from the cities. It may not have occurred to you in your side-walk life, that the dew falls in the country with tolerable regularity; and that, from sundown to ten in the forenoon, you are as much insulated in a cottage surrounded with high grass, as on a rock surrounded with forty fathom water,—shod *a la mode*, I mean. People talk of being "pent up in a city," with perhaps twenty miles of flagged sidewalk extending from their door-stone! They are apt to draw a contrast, favorable to the liberty of cities, however, if they come thinly shod to the country, and must either wade in the grass or stumble through the ruts of a dusty road. If you wish to see bodies acted on by an "exhausted receiver," (giving out their "airs" of course,) shut up your young city friends in a country cottage, by the compulsion of wet grass and muddy highways. Better gravel your whole farm, you say. But having reduced you to this point of horror, you are prepared to listen without contempt, while I suggest two humble *succedanea*.

First: On receiving intimation of a probable visit from a city friend, write by return of post for the size of her foot (or *his*.) Provide immediately a pair of India-rubber shoes of the corresponding number, and on the morning after your friend's arrival, be ready with them at the first horrified withdrawal of the damp foot from the grass.

Your shoes may cost you a dollar a pair, but if your visiters are not more than ten or twelve in the season, it is a saving of fifty per cent. at least, in graveling and weeding.

Or, Second: Enclose the two or three acres immediately about your house with a ring fence, and pasture within it a small flock of sheep. They are clean and picturesque, (your dog should be taught to keep them from the doors and porticoes,) and by feeding down the grass to a continual greensward, they give the dew a chance to dry off early and enlarge your cottage "liberties" to the extent of their browsings.

I may as well add, by the way, that a walk with the sod simply taken off, is, in this climate, dry enough, except for an hour or two after a heavy rain; and besides the original saving in gravel, it is kept clean with a quarter of the trouble. A weed imbedded in stones is a much more obstinate customer than a score of them sliced from the smooth ground. At any rate, out with them! A neglected walk indicates that worst of country diseases, a mind grown slovenly and slip-slop! Your house may go unpainted, and your dress (with one exception) submit to the course of events—but be scrupulous in the whiteness of your linen, tenacious of the neatness of your gravel-walks; and, while these points hold, you are at a redeemable remove from the lapse, (fatally prone and easy,) into barbarianism and misanthropy.

Before I enter upon the cultivation of grounds, let me lay before the reader my favorite idea of a cottage—not a *cottage ornée*, but a *cottage insoucieuse*, if I may coin a phrase. In the valley of Sweet Waters, on the banks of the Barbyeses, there stands a small pleasure palace of the sultan, which looks as if it was dropped into the green lap of nature, like a jewel-case on a birth-day, with neither preparation on the part of the bestower, nor disturbance on the part of the receiver. From the balcony's foot on every side, extends an unbroken sod to the horizon. Gigantic trees shadow the grass here and there, and an enormous marble vase, carved in imitation of a sea-shell, turns the silver Barbyeses in a curious cascade over its lip; but else, it is all Nature's lap, with its bauble resting in velvet—no

gardens, no fences, no walls, no shrubberies—a beautiful valley with the sky resting on its rim, and nothing in it save one fairy palace. The simplicity of the thing enchanted me, and, in all my yearnings after rural seclusion, this vision of old travel has, more or less, colored my fancy. You see what I mean, with half an eye. Gardens are beautiful, shrubberies ornamental, summer-houses and alleys, and gravelled paths, all delightful—but they are, each and all, taxes—heavy taxes on mind, time, and “dollar.” Perhaps you like them. Perhaps you want the occupation. But *some* men of small means, like a contemplative idleness in the country. Some men’s time never hangs heavily under a tree. Some men like to lock their doors (or to be at liberty to do so,) and be gone for a month, without dread of gardens plundered, flowers trod down, shrubs browsed off by cattle. Some men like nothing out of doors but that which can take care of itself—the side of a house or a forest-tree, or an old horse in a pasture. These men, too, like that which is beautiful, and for such I draw this picture of the *cottage insoucieuse*. What more simply elegant than a pretty structure in

the lap of a green dell! What more convenient! What so economical! Sheep (we may “return to muttons”) are cheaper “help” than men, and if they do not keep your greensward so brightly mown, they crop it faithfully and turn the crop to better account. The only rule of perfect independence in the country, is to make no “improvement” which requires more attention than the making. So—you are at liberty to take your wife to the springs. So—you join a coterie at Niagara at a letter’s warning. So—you can spend a winter in Italy without leaving half your income to servants who keep house at home. So—you can sleep without dread of hail-storms on your graperies or green-houses, without blunderbuss for depredators of fruit, without distress at slugs, cut-worms, drouth, or breachy cattle. Nature is prodigal of flowers, grapes are cheaper bought than raised, fruit *idem*, butter *idem* (though you may’nt think so,) and as for amusement—the man who can not find it between driving, fishing, shooting, strolling, and reading, (to say nothing of less selfish pleasures,) has no business in the country. He should go back to town.

NOTES ON INDIGENOUS TREES AND SHRUBS.

BY S. P. BUCKLEY, YATES Co., N. Y.

THERE are many indigenous shrubs and trees in different parts of the United States, which have never been cultivated, or but partially cultivated, in this country. To assist our gardeners and amateur florists, who may perhaps be induced to bring some of them into general cultivation, we propose, in a series of articles, to describe them, and indicate their localities, which we have obtained from personal observation during botanical tours in various sections of the United States. That they have been described in various botanical works is well known to every botanist, yet not described in such a manner as to arrest the attention of the flo-

rist as being worthy of cultivation, nor have their precise localities often been indicated. For the present we shall confine our notice to such as are not mentioned, or if mentioned, merely named as varieties, in “Brown’s Trees of America;” we mean those species which belong to genera already published by Mr. Browne, and which it would seem should not have been omitted in a work professing to treat of the trees of America.

REHODODENDRON PUNCTATUM.

(ANDREWS, in *Botanists’ Repository*, 36.)

Leaves perennial, ovate-lanceolate, acute at both ends, smooth; under side of leaves, pedicels and calyx, punctate, with resinous

dots; flowers in umbellate corymbs; segments of calyx short, obtuse; corolla funnel-shaped; lobes ovate; flowers purple, or bright pink, sometimes nearly white in shaded situations; throat punctate, with green spots; capsule elongate; shrub much branched, 6–10 feet high. Flowers May–June.

This is one of the most showy of our Rhododendrons, equalling if not surpassing the *Rhododendron maximum*, which is so highly prized by many florists. We first saw it at "Cæsar's Head," on our route from Asheville, in North Carolina, to Table Mountain in Pickens county, in South Carolina. "Cæsar's Head" is at the summit of the Blue Ridge, near the line between the two above mentioned States. From this place there is one of the finest views in the United States. The beautiful little valley of the Saluda lies far beneath, beyond which, at the distance of three or four miles, uprises the wonderful Table Mountain to the height of between 4000 and 5000 feet, with its perpendicular granitic sides. We again found the *R. punctatum*, with its gay purple and scarlet flowers, on and near the base of Table Mountain, the ascent of which is effected but at one place, and then is not accomplished without the aid of artificial stairs, which are fastened by means of iron bolts drilled into the solid granite. We also saw it in great abundance in Habersham and Rabun counties, in Georgia, on the banks of streams, especially near the falls of Toccoa and Fullulah, but it disappeared, on re-entering the State of North Carolina, near the head waters of the Tennessee and Savannah rivers. Subsequently we saw it in the greatest abundance at the falls of Linville river, and at the Table Mountain of Burke county, North Carolina. We found it in cultivation in the garden of Mr.

Baring, at Flat Rock, Henderson county, N. C. It is cultivated in England, where it was introduced from this country, in the year 1786.

RHODOENDRON CATAWBIENSE. *Lamel.*

MICHAUX, Fl. p. 258.

Leaves short oval, round obtuse, pale beneath, smooth; flowers in terminal corymbose umbels; segments of the calyx oblong-elongate; corolla campanulate; flowers purple. Shrub 3–5 feet high; flowers June–July. Resembles *R. maximum*, but is different from it in the narrower and longer segments of its calyx and its obtuse and shorter leaves. On the lofty mountains of the northwest portion of North Carolina, it is often found accompanying the *Rhododendron maximum*, from which it would not be distinguished by an ordinary observer. The top of the Roan Mountain, of Yancey county, one of the highest in the State, (6038 feet) about the middle of June, or a few days previous, assumes a gay and beautiful appearance, from scattered groups of the then flowering *Rhododendron catawbiense* upon its grassy and prairie-like summit.

Pursh has described three varieties of *Rhododendron maximum*. The first variety, *roseum*, he distinguishes as having leaves oblong elliptical, convex, obtuse at the base; beneath whitish or ferruginous; segments of the corolla subrotund; style longer than the stamens; flowers rose-white.

Second variety, *album*, has leaves cuneate lanceolate, plane, almost acute at the base, pale beneath; segments of corolla rotund oblong; style scarcely longer than the stamens; flowers small, white. This has been made a distinct species, *R. Purshii*, by G. Don, in *Gen. Syst.* 3, p. 843, ex *Decandolle*, vol. 7, p. 723.

Third variety, *purpureum*, very tall; leaves large, oblong elliptical, plane and ob-

tuse at the base, both sides green; segments of corolla oblong, obtuse; style little longer than the stamens; flowers purple. This has also been made a distinct species by G. Don, see *Decandolle*, vol. 7, p. 722.

We think the above are mere varieties of *Rhododendron maximum*, and perhaps it would be better to include them under that species, by varying and extending the description. In extensive explorations of the mountains of Virginia and North Carolina, we could never distinguish any specific difference in the varied forms assumed by *R. maximum*; they all seem to pass by insensible gradations into each other, yet all conforming to one general type. That this species should vary in its appearance is natural, since it is found upon the banks of streams near the base of the mountains to their extreme summit, where it becomes dwarfish.

The var. *purpureum*, Pursh says, "occupies the borders of lakes on high mountains, and grows to an immense size; its stem is often found eighteen inches and more in diameter, and its foliage triple the size of any other species." This has been copied by various succeeding authors, and Mr. BROWNE, in his *Trees of America*, p. 360, remarks that "it is a native of Virginia and Carolina, on the highest mountains, near lakes, where it forms a large shrub, or low tree, growing to the height of twenty-five feet, flowering in the months of May and June." We are confident there are no lakes, either on or among the mountains of Carolina; but of the mountains of Virginia, we can not speak with such confidence; yet we never saw a mountain lake there, nor Pursh's large *Rhododendron*, but he probably found it among the mountains of Pennsylvania or perhaps Virginia. Besides the foregoing perennial leaved spe-

cies, there is the dwarf *R. lapponicum*, growing on the White Mountains of New-Hampshire, and the high mountains in Essex county, in this State, (N. Y.) There is also another species, the *R. macrophyllum*, or the Large-leaved *Rhododendron*, which was found on the west coast of America, by Menzies.

RHODODENDRON NUDIFLORUM. *Wild Honeysuckle.*
(TORREY.)

Leaves deciduous, obovate-lanceolate and oblong-lanceolate; flowers slightly viscid, corymbose; tube of the corolla longer than the lobes; stamens much exerted; flowers in terminal clusters, appearing before the leaves are fully expanded; corolla pink or rose colour; calyx hairy and short. *Azalea nudiflorum* of many old authors. Woods and banks of streams; common in the northern and western States, as far south as Florida.

It is often cultivated in gardens, and is truly a beautiful shrub, with fragrant flowers which expand in April and May. There are eleven varieties of this species in cultivation in England, which are enumerated by Loudon.

RHODODENDRON VISCOSUM. *White Wild Honeysuckle.*
(TORREY.)

Leaves oblong lanceolate and obovate; flowers very viscid; tube of the corolla twice as long as the lobes, and stamens slightly exerted. *Azalea viscosa* of some authors, now generally referred to *Rhododendron*. A shrub 4-6 feet high, with numerous spreading branches near the top; flowers in terminal clusters, very fragrant; corolla white; calyx hirsute, small; flowers June-July. This very fragrant species occurs frequently in the southern part of New-York, on Long-Island, and in Connecticut and Pennsylvania, in moist places and woodlands. An excellent figure of it is given by Torrey in the first volume of the *Flora of the State of New-York*.

RHODODENDRON CALEDULACUM

(Torrey.)

Leaves oblong-lanceolate, pubescent or hirsute on both sides; flowers large, not viscid; segments of calyx oblong; tube of the corolla shorter than the segments. Shrub about six feet high, much branched; flowers vary from a bright flame colour to a deep yellow; and many varieties of it have been indicated, some of which are hybrids, between this and other species, arising from cultivation. It is extensively cultivated in England. It is common among and on the Alleghany mountains, from Pennsylvania to Georgia. Its bright flowers give the mountains a beautiful appearance during the months of May and June. It flowers in May in Georgia, and in June in Virginia. Pursh says, "it is, without exception, the handsomest shrub in North America."

RHODODENDRON NITIDA. *Shining Honeysuckle.*

TORR. Fl. 1 p, 425.

Branches smooth, leaves small, oblanceolate, slightly mucronate, coriaceous, both sides smooth, above shining; nerve beneath setaceous, margin revolute, ciliate; corymb leafy; calyx segments short; tube of corolla glandular, pilose, longer than the lobes; filaments much exserted. *Azalea nitida*. (Pursh 1, p. 153.) Shrub 4 to 6 feet high. Flowers fragrant, white, tinged with red. Those newly formed parts of the stem near the leaves and flowers, are glandular hispid. Flowers in July. We collected specimens of this shrub, in woods and boggy places, near Flat Rock in Henderson county, North Carolina. It is cultivated in England, where it was introduced from this country, 1812.

Pursh describes several other species, viz: *Azalea arborescens*, now *R. arborescens* of Torrey and others. This species is said by Pursh to grow on the blue mountains of

Pennsylvania. It grows to the height of 15 or 20 feet on rivulets. We believe it has not been introduced into England, nor found in its native place by any subsequent botanist. The following is from Pursh's Flora: "This beautiful species has to my knowledge, not yet been introduced into gardens. I have only seen it in its native place, and in the garden of Mr. JOHN BARTEAM, near Philadelphia, whose father introduced it many years ago. It rises from ten to twenty feet high, and forms with its elegant foliage, and large abundant rose-colored flowers, the finest ornamental shrub I know. The flowers are not so much pubescent as the rest of the species; the scales of the flower-buds are larger, yellowish brown, surrounded with fringed white border."

The following species are also enumerated by authors, as growing within the United States, viz; *R. glauca*, which is probably a variety of *viscosa*; *R. canescens*, which "grows on the banks of rivers in lower Carolina," and will perhaps prove to be a mere variety. *R. mediflora*, *R. bicolor*, said to grow in sterile, sandy hills, in Virginia and Carolina, and *R. hispidum*, which Torrey says, is scarcely distinct from *R. viscosum*.

The *Rhodora*, which is cultivated in some gardens, and is found growing native in Vermont, near Brattleboro and Guildhall, is now referred to *Rhododendron*, and called *R. rhodora*. We believe the foregoing, include all the *Rhododendrons* which have been found growing native in the United States, whose splendid flowers render the mountain scenery of the southern Alleghanies so delightful during the early part of summer. 'Tis true the travelling botanist and hunter, will there often find their course impeded, or stopped, by the almost impenetrable thickets of *Rhododendron* (Laurel.)

After crawling beneath them, or climbing over their tops, and having his clothes torn, he may perhaps wish the "Laurels" less numerous. All our Azaleas are now referred to the genus *Rhododendron*, excepting *Azalea procumbens*.

RHUS COTINOIDES.

Leaves oblong ovate, or ovate lanceolate, entire; part of the flowers abortive; pedicels at length elongated, and clothed with long shaggy hairs; flowers bright green; panicles terminal, scarcely exceeding in length the leaves; segments of calyx acute, and shorter than the petals; petals oblong ovate, obtuse. Tree, twenty-five to forty feet high; bark of the trunk and large branches rough, resembling that of the common locust, (*Robinia pseudacacia*); leaves large, very smooth, often 6–8 inches long, and 3–4 inches wide. Branches when first broken, emit an unpleasant odor, and are probably poisonous to some persons, judging from the burning sensation which they gave our hands; which have never been poisoned by any species of *Rhus*. Flowers April. *R. Cotinoides*, Nuttall in *Herb. Acad. Philad.*, but not described. *R. Cotinus*, Torr. and Gray's *Fl.* 1, p. 216. Mr. Nuttall discovered it on the high rocky banks of the Grand river, Arkansas, in fruit only. We found numerous small trees of this species, near the top of the mountain, on the road side, 3 miles from Ditto's landing, on the Tennessee river, and about 10 miles from Huntsville, in the state of Alabama. Again twelve miles from Huntsville, on the route to Winchester, in Tennessee, we found it in flower, near the base of the mountain, about three miles from the house of Mr. Bailus, with whom we had staid the

preceding night, and started next morning on foot to visit the nearest mountain. Here we saw trees of *R. cotinoides* at least a foot or more in diameter, and about fifty feet high, growing near streams, and in the rich alluvial soil at the base of the mountains. It is a very beautiful tree, and we hope that it will, ere long, be introduced into cultivation. We found it in the spring of 1842.

ZANTHOXYLUM CAROLINIANUM. LAMARCK.

Prickly Ash of Southern States.

Leaves pinnate; leaflets ovate-lanceolate or falcate-lanceolate, petiolate, crenately serrate, glabrous: flowers in large terminal umbellate panicles; sepals minute; carpels sessile, generally by threes.

A small tree about twenty feet high, and 2–4 inches in diameter, with few branches, except near the summit. Leaves very large, and with the petioles and branches of the tree, armed with prickles; the leaves and flowers are generally aggregated at the summit of the tree; the leaves and bark are very aromatic and pungent. Elliott, in his *Botany of South Carolina and Georgia*, remarks that it is apparently confined to the sea coast, and Torrey and Gray, in their *North American Flora*, state that it grows in sandy soil near the sea coast, in North Carolina, Georgia, and Florida. We found it very abundant in the interior of Alabama, growing in the richest prairie soil, by the side of fences and near swamps.

We think it well worthy of cultivation. It is strange that this is not mentioned by Mr. BROWNE, as it is far more worthy of a place among the "Trees of America," than the northern Prickly Ash, which is there described, but no allusion made to the southern species.

S. B. BUCKLEY.

West Dresden, Yates Co., N. Y.

THE CHINESE WISTARIA.

Our pages were adorned last month with a portrait of the *Yulan*, or Chinese White Magnolia, the pride of the lawn and pleasure grounds in April.*

Another hardy twining or climbing shrub, from the same "flowery land," is the gem of the garden and shrubbery, in the month of May.

It is, indeed, one of the loveliest of all vines of a shrubby character. Its clusters of delicate pale purple (or French gray) blossoms, are so numerous and so large, each raceme being 11 or 12 inches long, that they are highly attractive. Their perfume is delicious. The plant is perfectly hardy in this latitude, and will bear a temperature of 10 or 15° below zero. It grows freely in almost every soil, and, in a deep, rich loam, frequently makes shoots 20 or 30 feet long in a single season. Its foliage is abundant, and its color is a lively, pleasant hue of green. In a few words, we cannot but agree with LOUDON, in thinking it "the most magnificent of all hardy deciduous climbers."†

When this plant was first introduced into Great Britain from China, about 30 years ago, it was sold for six guineas a plant, and it was considered too tender to bear the open air. It may now be had in all the large nurseries in this country, at from 30

to 50 cents each, and is found to be perfectly hardy. As it is easily propagated by layers and cuttings, and requires no further than a slight training care, when once planted; we hope to see it, and the *Double Michigan Roses*,—two of the finest of hardy climbers yet known, for the middle and eastern states—become the ornament of every rural cottage and country house in the land. The comparative freedom from insects, the permanency and vigor of these climbers, added to their great beauty, must soon make them universal favorites.

The genus *Wistaria*, was named by *Nuttall*, in honor of Dr. CASPAR WISTAR, the celebrated Philadelphia *savant*.

There is also an indigenous species sometimes called the *Glycine*, *Wistaria frutescens*, a native of Virginia and the south and west. Though a pretty climber, its clusters of flowers are not more than a third of the size of the Chinese species, and it is much less ornamental, as well as hardy, in the northern states. Its flowers are produced later, or towards midsummer.

A new variety of the Chinese *Wistaria*, has lately been brought out to England, by the celebrated collector to the London Horticultural Society, Mr. FORTUNE. Its blossoms are *white*, and the effect of this and the purple flowered species will both be benefited, by planting and training them together. We have not learned as yet, of its introduction into this country.

We find the following interesting hints, for making the Chinese *Wistaria*, a *perpetual bloomer*, in *Paxton's Magazine of Botany*.

"Mr. KNIGHT, of the exotic nursery, Chelsea, has a simple method of causing this plant to flower three times a year, by the

* The portrait of the *Wistaria*, intended to accompany this article, is necessarily omitted, the engraver having failed to get it ready in season.—PUB.

† The Chinese *Wistaria*, though it will grow over arbors, pillars, or in almost any shape that it may be desirable to train it, appears to thrive best when growing in a warm situation, such as the south side of a building, wall, &c. There is a plant trained on the south side of the gardener's house, here, which has been planted about 12 years, and which now covers a large space. Every year it has increased in size, and in the number of its blossoms. While we write, (the middle of May,) it is in bloom, and there are 610 clusters of blossoms, fully expanded on it.

following treatment. After the first flowering is over, which will be about the end of May, he strips off all the leaves, and cuts off all the young and superfluous shoots which have been formed, to within a few eyes of the stem, which causes it to throw out fresh leaves, and to flower again in July and August; and after this flowering is over, the same process is repeated of cutting off the leaves, and this causes it to flower again in the months of October and November. It may be said that this plant will naturally flower twice, and sometimes thrice, in the season; but, when it does, (which is but very seldom,) the flowers are so very weak, and there are so few of them, that it is never worth notice; whereas, by the above simple process, an abundant succession of

flowers may be insured throughout the whole season. It should be remembered, that these remarks will not apply to *young* plants, but only to those that are well established."

Sometimes we have seen plants sent out from the nurseries, which appear for a long time after, to have a dwarfish, stunted habit, and do not climb freely. This is probably owing to their having been raised from downward or impoverished branches. It is necessary in such instances, to head the plants down to a single bud, as near the ground as possible, and to make the soil rich and deep, where they are planted. This will give them a vigorous start, and they will afterwards maintain a natural state of luxuriance.

THE DISEASE OF THE SYCAMORE OR BUTTONWOOD TREE.

WE are among the number of those who admire the Sycamore tree. It is among the loftiest and grandest of forest trees; its extremely rapid growth, and the abundant shade it affords, recommend it to those planters whose destiny compels them to create a wood all anew, on some naked spot where leaves are by no means as thick as "in Vallambrosa's shade;" and its bold development, in situations where it has room to grow, often renders it a very picturesque tree.

Then the plane tree of Europe and Asia, (*Platanus orientalis*), differs from our native Sycamore, (*P. occidentalis*), so slightly—chiefly to the eye of the common observer, in its rather smaller leaves and seed vessels, that the American Sycamore may be said to appropriate all the associations that belong to one of the most renowned umbrageous forest trees of the old world—the tree

which OVID called the "genial plane," and under which HORACE invited HARPINUS to drink Falernian wine with him. XERXES the great, however, seems to have been more impressed by the beauty of this tree, than any other of the ancients—since HERODOTUS tells us that, when he invaded Greece, he was so completely captivated with a remarkably fine specimen in Lycia, that he covered it with "jewels, bracelets, gems, and infinite riches, belonging to himself and his suite. For some days he could not leave it; and when at last he was forced to part from it, he caused a figure of it to be stamped on a medal, and continually wore it about him."

Though we think, if the great Persian could take a stroll through the valley of the Mississippi, he would behold a few native trees, perhaps even more worthy to fill the eye of so devout a lover of the beauty of the

vegetable kingdom; and, though we by no means place the Sycamore in the first rank of forest denizens, yet we can not but lament the sad condition in which it now appears, in most parts of the Atlantic States.

A disease, even now but little understood, which made its appearance in the south some eight or ten years ago, has gradually advanced northward, until it has reached, as we noticed last season, a point as far north as Canada, and as far west as Buffalo, and perhaps farther.

Its symptoms are, first, a blight and decay of the smaller twigs and branches; then a gradual scantiness of foliage; afterwards a mortality of the larger limbs, commencing at the extremities; which very frequently results—especially in dry soil, in the death of the whole tree. The ravages of this disease, from the general sprinkling of the Sycamore in our woods, and especially by the side of streams of water, has given a blighted and mutilated aspect to the sylvan features of the landscape in many parts of the country. And about Philadelphia and Boston, where, fifty years ago, this tree was quite a favorite in lawns and court yards, we observe with pain a show of sorry and diseased branches, in the place of the rich canopy of foliage which formerly waved over fine old trunks.

There have been a good many speculations about this disease, and at last the public, we are sorry to see, seem to have made up their minds to abandon the tree to its fate. We regret this, and must beg leave to say a few words more in favor of the time honored Sycamore in the day of its misfortunes.

As there are insects to be found in the young diseased shoots, it was at first believed, by many, that the Sycamore malady was caused by insect ravages. Along with

others, we shared in this opinion for some time, until Dr. HARRIS, of Cambridge, Mass., to whose labors in exposing the character and habits of the insects injurious to vegetation, all American cultivators owe so much, convinced us that the insects found in the Sycamore tree were those whose habits were well known, and that they were incapable of producing the disease in question.

It is the opinion of Dr. HARRIS, that the Sycamore disease is a malady caused by some unusual atmospheric state, which affects deleteriously the foliage and young shoots; an opinion which, upon farther examination and observation, we are inclined to adopt. The best authorities in Europe at the present moment agree, if they agree at all in the matter, that the *Potato* disease is owing to some state of the atmosphere productive of like disastrous effects to that plant. In both cases, the disease has appeared first in one part of the country, and has slowly extended itself to all other parts. In both, the system of the tree or plant seems enfeebled, and almost entirely destroyed by a blight, which may be traced to an original disturbance in the healthy action of the foliage.

Whatever may be the final conclusion regarding the Sycamore disease, one thing we know by experiment to be certain, viz: it is not without a remedy. And we therefore beg those of our readers, who may have fine old specimens of Sycamores, which are just attacked, or not yet wholly destroyed, to repeat our experiment, in order to save the lives of their trees.

The plan we allude to, is that of heading in, or shortening, very severely, as early as possible in June, the extremities of all the lower limbs; say, if possible, one-fourth of the extent of the branches, if small, or one-eighth, if large trees. This forces the tree

to develop new buds, and a strong set of fresh and thrifty shoots, with large and healthy leaves. This young and vigorous foliage, put forth at this late season, appears to have the power of resisting the *malaria*, so fatal to the ordinary, or normal growth. The tree rapidly makes wood, in a short time presents a rich head of large leaves, and in a few years becomes larger and more beautiful than ever.

Six years ago, when this disease had begun to destroy a large number of Sycamores in one of our more southern cities, we recommended this course, as an experiment, to be made on *four* specimens in a row of fine old trees, standing in one of the prin-

cipal streets. They were very much headed-back in the branches, and very speedily put out a fine new growth, which was not again attacked, and are now very beautiful and healthy trees. The other trees that were left to themselves, are now entirely dead, or so miserably bare of foliage, as to appear so.

Since that time we have seen the same treatment pursued in other parts of the country, with similar good results. We therefore make it more public, now, in the hope of saving many specimens, in various districts, that otherwise would fall victims to the malady, to the injury of many a pretty bit of landscape.*

REVIEWS.

A REPORT ON THE TREES AND SHRUBS OF MASSACHUSETTS; published agreeably to an order of the Legislature. By GEO. B. EMERSON, 1846. 8 vo. p p. 547.

IF we have been unintentionally tardy in noticing this admirable volume, published at the close of the last year, we are happy to know that it has not needed any commendation at our hands. A work so intrinsically excellent, and which fulfils the end in view so completely as this does, seldom requires any praise from the press. The public soon find out its quality, and the critic's labor is superfluous.

The *Survey of the State of Massachusetts*, has, like most things, planned and executed in that commonwealth, been, in the main, executed with signal care and ability. Dr. HARRIS' volume on the *Insects* of that State, decidedly the best popular treatise yet published on either side of the Atlantic, is now the standard work on this subject, for the use of all persons engaged in the culture

of the soil. Mr. EMERSON's volume on the *Forest Trees* of Massachusetts, now before us, is a worthy companion to it, and should have its place on the book-shelf of every country gentleman, and every person interested in our native forest trees in the northern states. It will teach the student in nature, and the ornamental planter, new sylvan

* Dr. HARRIS, while we were with him in the library at Harvard University, placed in our hands, an English volume, published in 1815, called "*Foster's Researches into the Condition of the Atmosphere*," from which we made the following extract. It appears that the Sycamore disease was not altogether unknown previously.

"Not only the animal, but also the vegetable kingdom, appears to be affected by the peculiarities of the atmosphere, which do not consist in its temperature or pressure. For example, in the summer of 1810, almost all the Plane trees with rough bark or rind, *P. occidentalis* [our American Buttonwood, Ed.] became diseased, in the neighborhood of London, and for many miles round; while the smooth-rinded Plane trees, (*P. orientalis*) remained in health." The season, he remarks, was neither unusually hot or dry.

We would add to this, that we have remarked in our own neighborhood, that the trees of the Oriental Sycamore have as yet, entirely escaped the disease which has prevailed among our native species.

beauties. It will give the farmers new ideas of the value of timber lands, and judicious hints for the maintenance and improvement of his woodland. It will give the artisan many useful hints, touching the relative value and uses of various kinds of timber; and it will show many an individual, who has never looked at the subject in a comprehensive light, the great value and importance, as well as the beauty of the woodland features of our country;—so that instead of sympathising with the destructiveness of the backwoodsman, he will feel as if he had suddenly been created a royal “commissioner of the woods and forests.”

What we consider most entitled to praise in this volume, is its clearness and its perspicuity, joined to the sagacity and observation it displays. There is nothing superficial, and there is no parade of science. It is a work that every intelligent farmer, educated at a New England school, may read and understand fully—and which is at the same time as truly (not pedantically) learned, as if it had been prepared for the Academy of Sciences. Its author is a man who has made himself familiar with what has been written by other authors, *and* he has studied nature and her facts, and digested the latter for himself. The result is, we think, a work of rare merit, and the only regret we have, on rising from its perusal, is, that it does not embrace the trees of the Union, or at least the northern states, instead of those only of Massachusetts. But now that this volume has been so well done, now that a part of the field has been so admirably surveyed, we do not despair of seeing the rest equally well covered.

Mr. EMERSON'S style is a happy one for the class of readers, with whom we anticipate the largest and best influence for good—the agricultural class. It is simple, and

forcible, and his reasoning in behalf of the more attractive side of arboriculture, is a happy combination of the utility and poetry of the subject, which will be much more likely to make an impression, than arguments drawn solely from the imagination. Thus, in urging the more frequent employment of *shade trees*—

“In a country so much exposed as ours is, in consequence of the remarkable clearness of the atmosphere, to the burning heat of the sun, the use of trees for shade, is not one of the least important. This use is closely allied to the last. A tree which furnishes a cool shade to the inhabitants of a house, is at the same time, and on that account, its best ornament. At the season when men travel for pleasure, a plain, low, modest house, speaks more to the feelings, and is more beautiful, than the showiest house, unprotected from the sun. The traveller in a hot day, welcomes every tree by the road-side. Even a thin fringe of grey birches, looks pleasant; and he remembers thankfully, the kindness or good taste which has spared or planted a tree with a head broad and thick enough for him to rest under and cool himself.

“Trees should be planted not only by dwelling houses and along roads; they should be in every pasture, and by watering places, and near every barn,—wherever cattle, horses, or sheep are to be provided for. All these animals suffer from our burning sun; and to say nothing of their enjoyment, the cost of shade trees will be many times paid back in its saving of the milk, fat, fleece, and strength, which will be the consequence of their being protected from the heat of the sun.”

In reviewing, a short time ago, a new work on the forest trees of this country, we expressed our sincere regret and disappoint-

ment, that its author had not gone into the fields and woods, and studied the many grand and noble specimens, instead of contenting himself chiefly with a perusal and recapitulation of the dimensions of the celebrated specimens of Europe. Mr. EMERSON, we are delighted to find, has no shortcomings of this kind. The pages before us abound with interesting accounts and measurements of the finest sylvan specimens in the Bay State,—so that any devout worshipper, who has, like ourselves, a little of the feeling of the Druids lingering in his nature, can easily learn where to go and search for the most fitting shrines.

Massachusetts is considered by many, a state where the soil is usually thin, and the forest growth by no means luxuriant. This may be just in the main, as a view of her whole superficial area. But the existence of specimens, the accurate measurements of which we find recorded in this volume, some of which we have ourselves examined with great satisfaction, proves that there are portions of her soil, rarely excelled in richness and fertility. The great Elm at Springfield, for example, measures twenty-five feet, nine inches, in circumference, three feet above the ground. A chestnut southeast of Monument mountain, on the road leading to Sheffield, in a pasture, measured, in 1844, at the ground, thirty feet two inches in circumference. A white oak at Bolton, measures twenty feet in circumference. And a buttonwood at Vaucluse, some miles from Newport, measured in 1839, twenty-four feet four inches in circumference. These are ancient monuments, as interesting to us as the foot prints in the old red sandstone to the geologists.

We have not space to go into a detailed examination of this book, and we will not deprive our many readers, who will yet be-

come possessors of it, of any of the pleasure of perusal, by disjointed fragments. Only the following remarks, we shall extract from the *preface*, with which we again commend the work heartily to their frequent study and reference.

“But it [the present Report] is for the common unlearned citizens, who live on farms in the country, and have few books and little leisure. It is, as far as possible, for it can not be wholly, divested of technical language, in order that they may understand it. And it will accomplish the purpose for which it is written, if it awaken them to a deeper sense of the value of the blessings by which they are surrounded, and lead them, or any of them, to resolve to preserve the old forests, and plant new.

“A few generations ago, an almost unbroken forest covered the continent. The smoke from the Indian's wigwam rose only at distant intervals; and to one looking from Wachusett, or Mount Washington, the small patches laid open for the cultivation of maize, interrupted not perceptibly the dark green of the woods. Now, these old woods are every where falling. The axe has made, and is making, wanton and terrible havoc. The cunning foresight of the Yankee, seems to desert him when he takes the axe in hand. The new settler clears in a year more acres than he can cultivate in ten, and destroys at a single burning many a winter's fuel, which would better be kept in reserve for his grandchildren. This profuse waste is checked, but it has not entirely ceased. It is, however, giving way to better views. Ever since this survey was begun, a wiser economy shows itself. May it be universal. A brief consideration of the general uses of forests, on a great scale, may have a tendency to produce this effect.”

THE FRUITS OF AMERICA, containing a selection of all the varieties cultivated in the United States. By C. M. HOVEY. Boston, Little & Brown. [Published in 8vo. numbers, once every two months, at \$6 per annum, or \$1 per number.]

THERE are few persons, not directly conversant with the subject, who are aware of the importance which *fruit culture* has assumed in the United States, within the last ten years. It is no longer confined to well kept gardens or enclosures of very limited area. Hundreds, and even thousands, of acres of fruit trees for market, have very recently been planted, in the middle and western States. Even of the finer kinds of pears, such is the facility with which they may be grown in some favorable localities, that extensive orchards are now coming forward. A very intelligent grower in the interior of this State has, at the present moment, a thriving young orchard of *fifteen acres* composed of the most select varieties only of this fruit. And so much more easily may the finer autumn and winter pears be grown in some parts of New-York, where the soil is deep, and the climate ameliorated by the influence of her broad lakes and rivers, than in any part of Europe, that we are confident they will, in a few years, form as regular and profitable a commodity of export to Covent Garden market, London, as our Newtown pippins do at the present moment.

The success of such volumes on Pomology as Mr. KENRICK'S *Orchardist*, and our *Fruits and Fruit Trees*, has prepared the way for works of a more expensive character. The field which a coloured work of this kind must occupy, is necessarily very different from the former works. Its high price, (added to the long time which it will require, at the rate of twenty-four plates annually, to give even a very moderate selection,) will keep it out of the reach of any

but the more wealthy amateur, or the professional grower, to whom such works are in a good degree necessary.

But, while a work of this kind, from its being confined to the hands of a few hundreds, instead of many thousands, can not have the influence, on the country at large, of a cheap and more popular work, it is a very acceptable addition to the library of the American pomologist, since its plan enables its conductor to give much more elaborate portraits and descriptions than can be comprised in a fruit *manual*.

The style and execution of the first number of Mr. HOVEY'S work, just issued, are excellent, though the plates are not properly coloured (by hand) like the English works, but *chromolithed*, or *printed* in colour, a cheaper mode of producing the effect of coloured engravings.

Each number of the work is to contain four fruits. The descriptions are given at full length, with the synonyms. The fruits in the present number, viz: *Beurré D'Aremberg*, *Glout Morceau*, and *Van Mons' Leon le Clerk* pears, and *Baldwin* apple, have already been so often described, and are so well known to most of our readers, that they will not of course expect to find much that is new.

Mr. Hovey, however, evinces an odd and amusing pertinacity and disregard of all authorities, in his still cherished opinion of the form of the *Glout Morceau* pear. He still persists in making the figure of the latter fruit more like that of *Buerré d'Aremberg* than itself—(though it has not escaped us that the stalk is a little more slender than the original *authentic* outline in his Magazine.)

The truth is, the *normal* form of this pear, which varies a good deal, is quite different from that of the *D'Aremberg*. It

has a longer and more slender stalk. This is the case, almost invariably, with the fruit here grown on the pear stock, and we have so represented it in our work on Fruits. COL. WILDER, of Boston, has stated (see page 21 of this journal) this to be true in his grounds, *except when grown on quince stocks*. MR. THOMPSON, the fruit authority in England, took pains in the *Gardeners' Chronicle*, for 1846, p. 16, to give outlines, side by side, of these two pears, in which the *Glout Morceau* is distinguished by its straight and rather slender stem. POITEAU, in his *Pomologie Francaise*, and NOISSETTE, in his *Jardin Fruitier*, both represent it, (that is the pear which is the true *Glout Morceau*), in

the same manner. So that we say, either Mr. HOVEY has been singularly unfortunate in his specimens of this fruit, after his attention has been repeatedly drawn to it, or all the most careful pomologists of the day, are wrong, and he alone is an accurate observer.

MR. HOVEY has not, perhaps, observed the usual courtesy of authors, in adopting the title of an established contemporary work on the same subject. He has however, doubtless, good reasons for so doing, and we trust his sagacity may be verified by the same large sale for his work, which has attended the publication of the original volume bearing the title in question, which has now reached the seventh edition.

FOREIGN NOTICES.

RHUBARB BUDS UNWHOLESOME.—In “the calendar of operations,” our correspondent some time since recommended that “Rhubarb buds now emerging, should be thinned out for tarts, where too thick.” Following that advice, a clergyman and his family of eight, partook of some tart containing the cooked buds. Seven of the number were made very sick at the time; three remained ill three days, and two young gentlemen have been ill, with occasional vomiting, ever since. This information, we derive from DR. COLTON, of Lynn.

Another correspondent also gives a suspicious case, arising from the use of Rhubarb.—“A woman at Chelsea, purchased some Rhubarb, and when about to prepare it, the greenness and freshness of the leaves induced her to try them as a substitute for spinach. The leaves were boiled, tasted, approved and dished up in the same way as spinach. Three partook of them; the father, mother and son (a school-boy.) Symptoms of sickness first appeared in the mother, who was obliged to leave the table; the boy was affected soon after leaving his school, from which he returned sick, with swellings about the mouth; the father who had left home on business, was obliged shortly to return, symptoms of sickness having attacked him also.”

We are not aware of any similar instances of serious consequences, following the use of Rhubarb; but it is by no means surprising, that a plant which forms so much oxalic acid, should be unsafe, and we recommend the subject to serious chemical inquiry. It is quite conceivable that the leaves should contain some principle in which they are deficient, as indeed is proved by the different manner in which the juice of the leaf-stalks and leaves are effected

by the same re-agents; but until there shall have been time for a careful inquiry into the organic products of those two parts, we can only warn the public against employing for food, any part of the Rhubarb except that which experience shows to be harmless.”—[*Gard. Chron.*]

[An instance occurred lately, in this neighborhood, of slight indisposition in a family, the members of which had partaken of the leaves, boiled and served up as spinach.—ED.]

CULTURE OF THE ALMOND IN FRANCE.—The almond will vegetate in any soil, provided it is not wet and marshy, and if its tap roots, penetrating to a great depth, do not encounter soil impregnated with stagnant water. I have seen almond trees which were quite old, making vigorous shoots and bearing fruit in abundance, in a very compact, clayey, argillaceous soil. In light sandy soils they bear abundantly, but are short-lived. The situations where I have frequently seen these trees most flourishing and fertile, are in courtyards, by the side of streets and roads, in villages, indeed in places constantly trodden upon, and even paved. Indeed, they possess this singular preference in common with several other kinds of fruit trees, (perhaps all,) as I shall remark later.

The most reliable authors advise that the almond should be planted in a warm and sheltered position.* It is possible that in the climate of Paris, and in the north of France, this precaution may be necessary,

* It is not to insure the maturity of the fruits, but to protect the blossoms from the north and northwest winds, which in a few days destroy the embryo fruit, especially when the blossoming is premature.—[*Poiteau*.]

in order that the fruit should reach maturity. But in central France, during half a century, there has not been a single year, except that of 1816, when the almonds have not ripened. Moreover, as the almond often flowers in the month of February, and as severe frosts are often experienced at the time of its fertilization, would it not be rational to retard its blossoming by every possible means, and would not the most simple as well as most effectual be, to place it in a cool aspect. In this case reason is borne out by experience. Who has not seen, as I have, that almond trees, planted behind walls, barns and houses, exposed to the north, bear fruit in abundance, while their neighbors, in an opposite exposure, remained unfruitful.

Bosc advises, in order to retard the vegetation of the almond, to graft it upon the plum. I know not if this operation would have the desired result; I have never had an opportunity of testing the fact, but I incline to a contrary opinion in consequence of experience analogous to it. I have raised peach trees grafted upon almonds, and others upon plums, growing side by side, and I have never remarked any perceptible difference in the time of their vegetation and blossoming.

The almond is usually most successfully propagated by budding, either near the ground, or high up on the stem. When strong plants are taken from the nursery to transplant, it is necessary to treat the roots carefully, as they have but few fibres. This tree, once grown, needs little care; it is only necessary to free it from dead wood, and useless or badly shaped branches. While it is young it is well to shorten back a little the annual shoots. Otherwise, excessive pruning is injurious. Its greatest enemy is gum, of which it is difficult to prevent the ravages. A longitudinal incision of the bark on those branches attacked, sometimes heals them. It is the method I have found most successful with all stone-fruited trees.

The almond preserves the memory of its native climate, during an exile of 2,000 years. The severity of our winters is often fatal to it. 18° centigrades (about zero of Fahrenheit) of cold that we experienced in December, 1845, injured greatly the young trees of one, two, and even three years old. It is to be feared that in many localities the young shoots of this year are much retarded. It may be remarked also, that these trees were still growing, and had not lost their leaves, when this unseasonable cold fell upon them, without any preparation. Happily these extremes of temperature are very rare in our climate.

This is one of the most fertile trees, and would yield a profitable crop, if its fructification was not so uncertain; but in Auvergne, only one harvest in three years can be depended upon. At the time of its flowering, it is one of the most beautiful ornamental tree. *Bravy, in Revue Horticole.*

COLORS OF FLOWERS.—The bright colours of flowers are given by a matter of a very different character, always fluid, and contained in cells situated immediately beneath the epidermal layer. Many of the different shades of colour are given by the superposition of cells containing different

coloured matters; thus yellow, seen through red, appears orange; green showing through red renders it apparently brownish. The very deep tints are produced by the close aggregation of many cells lying one over another. The layer of epidermis, or cuticle, (outer coat) of petals is colourless, and by assuming a papillose structure, it gives them the peculiar velvet-like character they sometimes possess; or when less developed and filled with colourless fluid, render the surface glaucous, or crystalline in appearance. The predominating colours are red, yellow, and blue, with the various intermediate tints; sometimes these colours are converted one into another in the petal after fertilization, (at which period the colours are brightest.) In many *Boraginaceæ*, (Bugloss tribe) the blue flowers become red; in *Myosotis versicolor*, the yellow flowers become blue; and in some *Onagraceæ*, (evening primroses,) white flowers turn red. Many flowers have their colours bedimmed or removed as they wither, especially the blue, which become most frequently white; white flowers usually turn brown; red coloured are more persistent; and yellow is generally unaltered, except in a few instances, when they are blackened. *Henfrey's Outlines of Structural Botany.*

CHINESE TASTE IN PLANTS.—When I was travelling on the hills of Hong-kong, a few days after my first arrival in China, I met with a most curious dwarf *Lycopodium*, which I dug up and carried to Messrs. Dents' garden where my other plants were at the time. "Hai-yah," said the old compadore, when he saw it, and was quite in raptures of delight. All the other coolies and servants gathered round the basket to admire this little plant. I had not seen them evince so much gratification since I showed them "the old man Catus" (*Cercasentilis*) which I took out from England, and presented to a Chinese nurseryman at Canton. On asking them why they prized the *Lycopodium* so much, they replied, in Canton English, "Oh, he too muchia handsome; he grow only a leete, a leete every year; and suppose he be 100 years ould, he only so high," holding up their hands an inch or two higher than the plant. *Fortune's Three years Wanderings in China.*

FLOWERING OF A NIGHT-BLOOMING CEREUS DURING THE DAY.—M. FORKEL, director of the royal hot-houses at Laeken, has discovered a method of causing this beautiful *Cactus*, which usually opens at night, to expand in the day time. The means employed were the following: seeing that the flowers were ready to open, he placed the plant in an ice-house, in the evening. The cold prevented the flowers from expanding during the night. The next day, the plant being carried into a parlour, the blossoms opened with their usual splendour, without the plant having received the least injury from its abode in the ice-house. *Bravy, in Revue Horticole.*

DUTCH HUSBANDRY.—The foundation upon which the agriculture of Belgium rests, is the cultivation of clover, which seems indigenous, since none of the most ancient records notice its introduction, but speak of it as familiarly as of hay or oats. It is probably from this country, that the

plant in question has been, though but recently, slowly, and hitherto only partially, introduced amongst the farmers of Germany, France, and Great Britain. The clover in Flanders is sown in every sort of grain, in wheat, rye and winter barley, in the spring of the year, when the blades of those plants have acquired a growth of three or four inches; and with oats and summer barley at the same time with those seeds. It is also often sown with flax; and in general, the crops grown between those plants are more luxuriant than when sown with the cerealia. It frequently happens, when sown with flax, that clover yields a heavy crop a few months after it is sown; two still more abundant crops the next year, and sometimes even three; and if, as it occasionally happens, it be suffered to stand another year, it will yield one heavy crop, and afterwards good pasture for cattle, till it is plowed up to receive the seed of wheat, which usually follows it. The original strength of the plants which yield such abundant nourishment is undoubtedly due to the care taken in pulverizing the soil by frequent plowings and harrowings, to the careful extirpation of all weeds, and to the copious stores of manure laid on the ground, and its complete amalgamation with the soil; but the successive harvests which the plants yield are attributed, and with apparent probability, to the top-dressings which are bestowed upon them. The top-dressings administered to the young clover consist either of rotten yard-dung, lime, pigeons' dung, coal, or native turf-ashes, and are laid on as soon as the plants begin to extend themselves over the ground. Sometimes the plants are refreshed with a liquid manure, which will hereafter be noticed.

These manures, though administered to the clovers, as far as they can be obtained, are found far inferior in powers of fertility to that substance which is most generally used, and the effects of which, form the theme of the praises bestowed by all who have witnessed the Belgian husbandry. The turf ashes of Holland, are sown by the hand on the clovers, in quantities varying from eighteen to twenty bushels to the English acre.

This small quantity produces a most surprising and almost magical effect. Within a few weeks after it is sown, a field where none or but slight straggling plants were to be seen, becomes covered with a most abundant herbage. The parts of a field sown with these ashes, at the first mowing, show their efficacy in a most striking manner; the clover being frequently a foot higher on such parts, than on those where its sowing has been omitted. These ashes are found superior in efficacy to such as are made from the turf commonly used for fuel in Flanders, inasmuch that one-third of the quantity is deemed sufficient to afford a great productiveness. We have no analysis of the turf-ashes of Flanders, by which we can form a comparative estimate of the proportional substances which create so vast a difference between their vegetative faculties and those of the turf-ashes of Holland. The latter have been carefully analyzed by Mr. Brande, secretary to the Royal Society of London, who found them to contain

Siliceous earth,	- - -	32 parts.
Sulphate of lime,	- - -	12 "
Sulphate of muriate of soda,	- - -	6 "
Carbonate of lime,	- - -	40 "
Oxide of iron,	- - -	3 "
		93
Impurities and loss,	- - -	7 100

These ashes are brought from Holland by the canals to Brussels, whence they are conveyed by land carriage to the different farms where they are applied. Long practice has so convinced the Flemish farmers of their benefit, that a common proverb in the *patois* of the country, may be thus translated: "He that buys ashes for his clover pays nothing, but he who does it not, pays double." They are frequently fetched from the canal by persons who have to carry them forty, or even fifty miles by land.

The abundance of the clover produced from the soil of Flanders, enables the cultivator to maintain a great number of cattle, principally cows, the dung of which is managed with an attention and care that is highly worthy of imitation, and contributes to maintain in a state of high fertility that soil which yields the most exhausting crops. "The farmers," says the Abbe Mann, "supply the want of straw in the following manner: The peat or sods which are cut from the heath, are placed in the stables and cowstalls as litter for the cattle. The ground under them is dug to a certain depth, so as to admit a considerable quantity of these peat sods, and fresh ones are added as the feet of the cattle tread them down into less compass. These compose so many beds of manure, thoroughly impregnated with the urine and dung of the cattle. This mixture produces a compost of excellent quality for fertilizing ground where corn is to be sown." *Ency. Brit., seventh edition.*

CHAPMAN'S PRINCE OF WALES PLUM.—This Plum was raised at Brentford End, in 1830, and is a seedling from the Orleans, but is quite distinct from that variety. It is larger, of a different shape, being inclined to be oval, different in color, which is a bright purplish pink, with much more bloom, and the flavor is much superior. The flesh is yellowish or pale amber, and parts from the stone. Unlike the Orleans, it never cracks, and the shoots differ from those of that variety, in being smooth, whereas in the Orleans they are downy. The leaves are broad, roundish, and easily distinguishable from those of any other Plum. The trees are of vigorous growth. Upon stocks planted in the spring of 1844, and budded in August following, are this year shoots upwards of eight feet in height. The bloom is protected by the foliage in a most remarkable manner, and it has a peculiar habit of spurring all up the branches. Trees of this variety, three years old, have been covered with plums as thickly as they could be placed, at three feet up the stem, [so that it has been necessary to fasten the branches up with stakes to prevent them breaking down. It bears well on suckers from the mother plant. *London Hort. Mag.*

DOMESTIC NOTICES.

VARIATIONS IN STRAWBERRY BLOSSOMS.—In the second number of the *Horticulturist*, there were some editorial remarks on the liability to variation of the organs of fructification of the strawberry, which forcibly arrested my attention. From that time to the present I have borne them in mind, with the view of testing their accuracy when the strawberry came fully into flower. That period has arrived, but I see nothing which tends in the slightest degree to support them. The flowers of Hovey's seedling, for instance, have precisely the same characteristics now which they had when it first came into my possession five years ago. I have it under every variety of circumstance—in old beds, exhausted by heavy and repeated crops, and young plantations which have not yet borne; and I can safely say, that I have never yet seen a flower which was not pistillate in its character. It is quite probable it may have become "permanently" pistillate before I received it, if such a thing be possible; but in contending for so strange a metamorphosis as that which the article in question was designed to establish, the facts should be numerous and well authenticated, and uniform. Venders of Hovey's seedling have, even within the past year, advertised plants both with pistillate and perfect flowers; [yes, and rightly, Ed.] and it might reasonably be supposed [why so?] that some, amongst the large number I have in cultivation, would show the variation. But all cultivators of the strawberry know how easy it is for spurious varieties to gain admission into beds from which the utmost vigilance has been used to exclude them. [We think it next to impossible where strawberries are carefully grown.] Such being the fact, I cannot but suspect that it was the operation of this cause which led to the extraordinary deductions which distinguish the article referred to. To admit the truth of them without further investigation would, it appears to me, tend in a great measure to unsettle everything regarding the supposed unchangeable characteristics of plants. If they may undergo change in one thing, they are equally liable to it in others, until finally they may lose their specific features. Propagated as the strawberry usually is, every plant may be regarded as nothing more than an extension of the first individual of the family, and, as it were, identical with it. I would respectfully suggest that this matter be carefully reviewed during the present season, and placed on its proper basis.

And as the time is now appropriate, I would also take the liberty of suggesting the propriety of preparing accurate descriptions of the best varieties of the strawberry, in which the characters of the flowers should be particularly stated. Sometimes—not unfrequently—this might furnish the only means by which one could determine whether he was cultivating the genuine or a spurious sort. It is not uncommon to see very distinct plants, received from different sources, bearing the same name. I have, for example, the *British Queen*, from different establishments of great respectability, one of which

is staminate and the other pistillate. Full and authentic descriptions of all the celebrated strawberries would undoubtedly be of great value to the horticultural community.—*FRAGRARIA. Petersburg, Va., April 29th.*

[REMARKS.—Our correspondent judges, like many others, solely from the plants in his own garden, and then asks if it might not reasonably be expected that some among the plants in his bed should show a variation? Our own remarks were based on observations of the strawberry for years in various parts of the country. While we write, strawberries are again in full bloom, and we are obliged to say that our views advanced last year, are confirmed. We have a new bed of Hovey's seedling, now in full bloom, which is full of *perfect flowers*, and which, aside from accidents, we will warrant to produce a large crop of the finest fruit. We have also an old bed of the same variety in which pistillate plants are to be found.

Our correspondent talks of the "unchangeable characteristics of plants," &c. We presume, since he is so skeptical as to our humble views, he will not object to listen to an extract from an article bearing on this subject, from the pen of Professor LINDLEY, acknowledged to be the highest authority at the present moment in England. The article is in the *Chronicle* of April 10th, and is in reply to a correspondent who complains that his strawberries are all *blind*—the old complaint of imperfect blossoms. Dr. LINDLEY says, in order to understand this matter, and how a variation may be produced, it is necessary "to examine the young flower buds as they exist in the plant, as it makes its first move towards growth. At that time, they are collections of tiny scales, placed over a small, spongy centre. By degrees they take on the forms of calyx, corolla, stamens, and pistil. The calyx and corolla are the most simple, grow the quickest, and most easily bear to be hastened; stamens require most time for growth, the pistil most of all. When high temperature, night and day, with abundance of moisture, and as much light as February yields, are suddenly applied to the strawberry, it is compelled to grow; the pre-determined parts advance, and, obedient to influences which their nature cannot disregard, they by degrees unfold; but how? The oldest parts, namely, the calyx and corolla, simple in structure, and already advanced in their formation, suffer no injury, but appear in their usual state, arraying the blossoms in gay apparel of white and green. The next, however, the stamens, having less time to form, acquire, perhaps, their yellow colour, but are powerless for their allotted office, while the pistil, the most complicated of all the parts, that which demands the longest period for its perfect formation, but which is the latest that the flower produces, and which is to become the fruit, is a mere tuft of abortion, incapable of quickening, and shrivelling into pitch-black threads as soon as it is fully in contact with the air.

"All this was long ago proved by Mr. ANDREW

KNIGHT, although the *rationale* was not explained. That admirable experimentalist found that when melons were forced too fast, they bore nothing but male flowers; and that cucumbers, if grown very slowly, produced nothing but females. That is to say, the excessive growth which he obtained, gave the complicated females no time to organise; but was enough for the preparation of the males, whose structure is more simple. On the other hand, where growth was preternaturally slow, the period of gestation was so long that all the parts of the flower which, under a higher and quicker stimulus, would have become males, fashioned themselves into the complicated condition of females."

In a succeeding number of the same journal, Dr. LINDLEY says, in referring to the foregoing remarks—"we only pointed out *one cause* of this defect in the organ. Others might be named; among which is frost:" to which we will add, exhaustion in an old bed, and peculiarities of soil.

A neighbor of ours had a stock of Hovey's seedling from us, three or four years ago. When they came into fruit with him they bore well, and the flowers were perfect. Last spring he came to us for a fresh supply, as his bed had nearly all become pistillate—while ours remained perfect. His soil is a gravelly loam, ours a strong loamy clay.

We have sent plants of Hovey's seedling, with perfect blossoms upon them, to the Massachusetts Horticultural Society this season for their examination.—Ed.]

THE CURCULIO.—Now is the season when this greatest of foes to the plum tree, makes its appearance, and our readers will no doubt put in practice various modes for its destruction. The following new suggestion, which we extract from the *Ohio Cultivator*, is worthy of attention:

"A new remedy, and one that to our mind affords promise of more utility than any other within our knowledge, was made known to us recently, by our friend, Gen. J. T. Worthington, who informed us that it had been practiced with much success, by one or more fruit growers at Chillicothe. Take a number (one for each tree) of tubs, or boxes, that will hold an inch or two of water in the bottom; whitewash the inside, and place them under the trees—if elevated on a barrel, or by other means, so as to bring it near the lower branches, all the better; then pour in water so as to cover the bottom an inch or more in depth, and in the dusk of the evening when the Curculios begin to appear, set a lighted candle or lamp in the middle of the tub or box, letting it remain for two or three hours or longer, each evening, during the period the insects are flying, which is found to be but for a very few days.

The light and reflection from the whitewashed sides, attract the insects into the tub, and falling into the water, they are unable to crawl out. *Hundreds* have been caught in this way, in a single tub, in one night, during the time of their thickest flight. The remedy would probably be more effectual, if the trees were to be shook or suddenly jarred, occasionally, during the evening when the insects are most numerous.

We hope that a number of our fruit growing readers will try this method the present season, and let

us know the result. The trouble and expense are very trifling compared with the value of a crop of fine plums, and the satisfaction of thinning off these hateful marauders."

A correspondent in New Jersey, formerly much troubled with this insect, took our advice, and threw up the soil under his plum trees, in trenches and ridges, late last autumn. This was done for the purpose of destroying the insects, in their winter quarters, by freezing them. He writes us, lately, that it has apparently been quite successful, as he has seen few, or none of the insects as yet, though they have punctured all the fruit in the garden of a neighbor, about a quarter of a mile distant.

A NEW NATIVE PEAR.—Dear Sir: "The Onondaga Pear," described by GENERAL LEAVENWORTH, in the *Horticulturist*, is well worthy of the high character given to the same by him, and is attracting considerable attention in this vicinity.

There is also another Pear, which I esteem among the best, called the "Richard's Pear." It is a local Pear, being confined I believe, entirely to this country. The original tree is growing in the garden formerly owned by JEDEDIAH RICHARDS, in Elbridge, Onondaga co., N. Y. Mr. RICHARDS in 1818, sent several scions in a letter, to GROVE LAWRENCE, Esq., at Camillus, from which several fine bearing trees have been produced. Gen. JAS. R. LAWRENCE, has also several trees of the same variety, on his place in Camillus. In my opinion, it is a richer Pear than the "Onondaga," but it is not quite as large. The Onondaga inclines a little to acid, but perhaps this may be corrected in a measure, by cultivation.

RICHARD'S BEURRE.—Size, large; shape, obovate; colour, yellow, with a red cheek, qualities, sweet, very juicy, melting and buttery; ripens in Sept. I will send you specimens of the fruit next fall, and scions next spring, should you desire. Whether this is a seedling or not, I cannot state, Mr. RICHARDS having removed some years since, to Ohio. I have called this Pear, the pomological world being willing, RICHARDS' BEURRE.—Yours, truly, D. C. LE ROY, Cor. Secretary of Onondaga Hort. Society. *Syracuse, May 7, 1847.*

THE OSAGE ORANGE.—MESSRS. ELY & CAMPBELL, of Cincinnati, have done the country a service by procuring from the banks of the Red River, a large quantity of the seed of this beautiful and hitherto rather scarce tree. They have placed it for sale with the principal seedsmen in our cities, (J. M. Thorburn & Co., New-York; Wm. Thorburn, Albany; Dair & Co., Cincinnati, etc.) and we hope that, at least in all districts south of us, an extensive trial will be made of it for hedges. It will scarcely succeed well much to the northward of us, except in situations where the peach will ripen well and regularly in the open air, and where the thermometer does not sink in winter more than 3° or 4° below zero. For the middle and southern portions of the Union scarcely anything can be superior to the Osage Orange as a hedge plant.

The seeds may even yet be planted with success, after soaking them 12 hours in warm water. Ample

directions for sowing and after culture, have been given by us in a Chapter on Hedges, p. 345 of this journal.

REMARKS ON NEW ROSES.—*The Cloth of Gold Rose*. (*Chromatella*).—Novelties in Horticulture are quite as likely to create an excitement among the friends of so interesting a science, as anything else we know of, and it is amusing to witness the ardor, of both sellers and buyers, when any thing new is brought out. A few years ago, Mr. Rivers, of Sawbridgeworth, near London, brought over from France a Noisette Rose, to which he gave the name "*Cloth of Gold*," and a description of the most glowing character. It was "*very double, large, and of a deep golden yellow*." No sooner was it announced as on sale, than every body was anxious to obtain so fine a thing, so anxious indeed that a guinea in England, and five dollars here, was paid for plants a very little better than a recently struck cutting. As fast as each plant grew large enough, it was forthwith mutilated (cut in) for the purposes of propagation, consequently the flower was not to be seen, though every body wished to see it. Nurserymen advertised, *puffed*, and sold it, amateurs purchased on the strength of what was said of it, and nursed their treasure with all the care imaginable, watching day by day for the welcome sight of a flower bud. Nine tenths of those whose expectations were thus elevated, were doomed to disappointment in not beholding a bloom at all, while the few who did, saw not what their imagination pictured. Was the whole thing then a fraud upon the public, a piece of deception benefitting a few at the expense of the many? It was so to some extent. The name was captivating, the colour particularly attractive in a Rose; it seemed all that could be desired. If then this Rose is *not* true to the description given of it heretofore, what is its true character? For two years we have grown the plant in our own garden, and had a few flowers; we have also seen eight or ten blooms in several of our nurseries, all on moderate sized plants, and one exceedingly fine flower, cut from a rather large specimen in Messrs. Winter & Co.'s, greenhouse. Taking these samples as a fair criteria to form a judgment upon, the following description will be found correct.

NOISETTE ROSE, CLOTH OF GOLD, or *Chromatella*.

Plant of moderate growth, not inclined to make strong shoots until well established in suitable soil, nor adapted to pot culture. Foliage inferior to many others of its class, in size and colour. The flower *not* very large, nor *very* double, form indifferent, the petals too much reflexed, and not well set together. Flowers persistent. Colour, a good yellow in the centre, shaded off to a much lighter hue outside. The petals want substance. Blooms sparingly under the usual treatment. A little tender in this climate, well suited to train under the rafters of a greenhouse.

In the open soil, *made rich*, and with a warm exposure, it will, after a few seasons, grow with more vigor, trained to the house or a trellis, in which situation it will form an interesting object, but not more so than "*Solfatere*," or "*Lamarque*." In

shape and hue, "*Smithii*" is to our mind, a better rose. The flower from Messrs. Winter & Co.'s, was cut from a good strong plant grown in a box of rich earth, and the shoots trained beneath the lights of their greenhouse.

It must not be inferred from our remarks, that the Cloth of Gold Rose is condemned, or undeserving of the cultivators' care; we mean no such thing; but we do mean to say that it is not what it was represented when it first came out. As to the colour, "*Harrisonii*," "*Williams' Yellow*," and "*Persian Yellow*," are far its superiors; the last is unquestionably the finest yellow known.

The following new Roses will in all probability be introduced to our collections before January next; most of them are decided acquisitions to the list of *really good kinds*, and a few, singularly beautiful

R. Provence.	Noisette.
Amandine. (Vibert.)	Phaloe (Vibert.)
Antigone. (")	Bourbon.
Arcl. (")	Beaute de Versailles. (Sou-
Desdemona.	chet.)
Duchesse de Rohan. (Rene)	Cesarine Souchet. (")
Perret.	Charlemagne (Dorisy.)
Niobe. (Vibert.)	Docteur Hardouin. (Oger.)
Ponceur.	Duchesse de Normandie (On-
	du.)
R. Damask.	Eugenie Guinoiseau (Guinoi-
Aline. (Vibert.)	seau.)
Candide.	Leveson Gower. (Beluze.)
Eudoxie.	Margat Jeanne. (Souchet.)
Isidore. (Vibert.)	Montaigne. (Vibert.)
La Negresse.	Sydney Dorisy. (Dorisy.)
Nephe.	Triomphe de la Duchesse. (Be-
Naomi. (Vibert.)	luze.)
Veturie.	
R. Moss.	Hybrid Perpetuals.
A fleurs d'Anemone. (Vibert.)	Amiral d'Estaing. (Portemer.)
Aixa. (Laffay.)	Celine Perpetuelle.
Catherine de Wurtemberg.	Commandant Fournier. (Laf-
Comtesse de Noe. (Portemer.)	foy.)
Etna. (Vibert.)	Comte de Montalivet.
Heloise. (")	Coquette de Mendon.
Indiana. (")	Eugenie Sue.
Princesse Royal. (Portemer.)	General Morangier. (Porte-
Virginal.	mer.)
Striped Provence.	Gloire d'Angers. (Boyau.)
Aramis. (Vibert.)	Gulistan. (Vibert.)
Eslier. (")	Jacques Laffite. (Vibert.)
Genl. Bertrand. (")	Leonie Verger.
Meen. (")	Lala.
Ellet Flamand. (")	Louise Favre. (Lacharme.)
Perle des panachees. (")	Mathilde Jourdeuil. (")
Tea.	Pompon de St. Radegonde.
Souvenir d'au Ami. (Belot-	Princesse de Salerne. (Margot-
Defougere.)	lin.)
	La Renouele. (")

We take much pleasure in adding and recommending the following fine kinds:

WILLISSON'S	WILLISSON'S—continued.
Curled crested moss.	" Weeping Rose.
" New " "	" Annie Vibert Crispum.
" Crimson " "	BURGESS'S
" Mottled " "	Victoria Bridal Wreath.
" New White Provence.	" Lilac Perfection.
" General Tom Thumb.	" Mrs. Giamy.
(Seldom exceeds two	" Metropolitan.
inches in height.)	" Prince of Wales.
" Queen Victoria.	" Turtle Dove.
" Blotched Leaved Bengal.	" Essex Hero.
" Milk Maid China.	Rose Willissonii.
" Menue de Meaux Minima	
Flushing. May. 1847.	

WM. W. VALK, M. D.

CEDAR OF LEBANON.—Since writing the leader in this number, we have seen at the nursery of Mr WM. REID, Murray Hill, New-York city, a small

stock in pots of fine Cedar of Lebanon plants raised from the seeds of Mr. Ash's fine tree in Westchester county—the finest in the country. They are about five or six years old, and may easily be removed to any part of the country.

.....
WOUNDS IN TREES.—I have tried a great many compositions and plasters for wounds made in pruning, and I have found nothing equal to the exceedingly nice and complete mixture recommended on page 32 of your work on *Fruits*, as the *Shellac composition*. The great rapidity and ease with which it is applied, are of themselves strong advantages. But it is also inconspicuous, and occupies no space, adheres firmly, and keeps out the air, while the moment that the lip of new bark is ready to close over the wound, it finds no impediment, as it does in the case of many of the old-fashioned plasters. All farmers should have a bottle at hand at this season of the year. Yours, truly.—X. Y. Z. *Baltimore, May.*

.....
IRON FOR THE PEAR TREE.—DR. THOMAS CLOSE, of Portchester, N. Y., sends us the following additional evidence of the good effects of iron, in a letter received from him some time since:

"A friend of mine at Olney Park, near Philadelphia, writes me that he has greatly enlarged and improved his Seckel pears by supplying the soil pretty liberally with slag from the iron foundry. My own observation leads me to believe that iron is of great value in protecting the peach tree from the yellows."

.....
LABELS.—A word upon the subject of *Labels* for trees and plants. We want something combining the elements of convenience, durability and cheapness. The result of my cogitations upon this matter, is as follows:

1st. *The material.* Cut strips of Zinc, of an

elongated triangular form, ten inches long, half an inch wide at one end, and running to a point at the other.

2d. *Mode of Fastening.* About four inches from the wide end of one of these strips, punch a hole. Bend the pointed end over a twig of the tree, and put it one-eighth of an inch through this hole, and clinch it with the fingers or a small pair of pincers.

3d. *The Writing.* The place for this is between the wide end of the label and the hole for fastening it. The ink to be used is made of—

Verdigris, (powdered,) - - -	2 parts.
Sal Ammoniac, - - -	2 "
Lamp Black, - - -	1 "
Water, - - -	20 "

Mix these ingredients in a mortar, using at first only so much of the water as is sufficient for mixing them, and add the remainder of it afterwards. The ink should be put into a well corked bottle, and shaken from time to time. In a few days it will be fit for use. Any druggist or other person can prepare it. When put away, let the bottle stand cork end downward, to prevent the escape of the Ammonia, and the ink may be kept for years ready for use. Write with a quill pen.

It will sometimes be necessary to remove the label from the twig upon which it is fixed to a smaller one. This can easily be done without the aid of any tool other than the fingers.

Labels of the above description will last a man's lifetime. But if you know anything better, please do not fail to give your readers the benefit of it. As Horace says—(if you permit your correspondents to show their Latin)—

— "Si quid novisti rectius istis,
 Candidus imperti: si non, his utere mecum."

I ought to add that nothing of the above is original with me, except the *mode of fastening* the labels. Very respectfully, &c., GEO. JAKES. *Worcester, Mass., 1847.*

MASSACHUSETTS HORTICULTURAL SOCIETY.

April 17th, 1841.—President WILDER, in the Chair.
 A package of seed was presented to the Society by Mrs. Percival, and it was

Voted, That the thanks of the Society be presented to Mrs. Percival, and that the seed be placed in the hands of the Society's Professor of Botany.

The scions received from A. H. ERNST, Esq., of Cincinnati, were distributed to the members of the Society.

May 1st, 1847.—President WILDER, in the Chair.

E. M. Richards, for the committee appointed to fix the days of the annual exhibition of the Society, reported, verbally, that they had decided upon Wednesday, Thursday and Friday, the 22d, 23d and 24th days of September, next, and it was

Voted, That the report be accepted.

The following gentlemen were elected Life Members of the Society, viz:

Jonathan Chapman, Chas. H. Mills, A. W. Thaxter, Thomas Lamb, J. Eliot Thayer, J. W. Blodget, Isaac Babbitt, Thomas P. Cushing and Otis Everett, jr, Boston, Joseph Manning, Medford.

Fifteen gentlemen were elected subscription members.

May 1st, 1847.—President WILDER, in the Chair.

A communication was received from Prof. ASA GRAY, of Cambridge, accompanied with a copy of his *Chloris Boreali-Americana*, and also a copy of Mr. Ward's *Treatise on the "Growth of Plants, in closely glazed cases,"* and it was

Voted, That the thanks of this Society be presented to Prof. Asa Gray, for his liberal donation, and that the corresponding Secretary be requested to forward him a complimentary letter.

A letter was received from the Antiquarian Society of Worcester, expressing their thanks for a copy of the "Transactions of the Society."

A copy of the "Transactions of the Worcester County Horticultural Society," was received from GEO. JAKES, Esq., and it was

Voted, That the thanks of the Society be presented to Geo. Jakes, Esq.

EDWARD C. R. WALKER, *Rec. Sec.*

PENNSYLVANIA HORTICULTURAL SOCIETY.

The stated monthly meeting occurred on Tuesday evening April 14th. The President in the chair.

The display was a most interesting one, and the society was treated to a most beautiful and varied collection of plants. Among those presented by the President's collection, were a fine specimen of *Rhododendron* variegatum, the beauty of the flowers, contrasting singularly with its variegated foliage; *Metastachyum floribundum*, *Azalea parviflora*, *Oncidium* sp. nov., etc. in full flower; also tables of *Pelargoniums*, seedling *Cinerarias*, seedling *Potamogeton*, and fine bouquets. Mr. Mackenzie's collection consisted of *Apocynum* of choice and new varieties—*Cucul*, *Rhododendron*, *Knights*, etc.; but the most interesting was his display of cut *Camellias*, presenting a regular challenge of seventy-two varieties on one occasion, several of which were new, and shown for the first time. Mr. Buist exhibited, in a choice collection, a large splendid *Acacia* in profuse bloom, *Oncidium racemosa*, with a stem of flowers of great length, *Heaths*, *Roses*, etc. Mr. Dryburgh's collection contained fine *Azaleas*, *Pelargoniums*, select *Roses*, etc. Mr. Henderson, gardener to Thos. W. Smith, exhibited an extensive collection of exotics, some of the specimens of much beauty; also a fine display of indigenous plants in flower, and bouquets. James Bisset, gardener to James Dundas, presented fine plants of *Banksia* rose, in rich clusters; *Euphorbia splendens*, *Pelargonium*, *Polyanthus*, etc. B. Gulliss, gardener to Jacob Snider, Jr., a large collection, among which were fine specimens of *Cereus flagelliformis*, *Pelargonium*, *Heliotropia*, *Pansies* and many others. Robert Kilvington a table of choice plants; John Sherwood, superb *Roses*, etc.; Patrick Gallagher, gardener to Miss Gratz, a good collection of plants and *Pansies*. Henry A. Dreer, a superb show of *Hyacinths*, in pots; And Saml. Maupay, beautiful *Pansies*. Of fruits there were seen bunches of three varieties of *Grapes*, and a dish of *Perceval Strawberries*, and plants of the latter bearing fruit, from James Dundas' greenhouse. Of vegetables, there were two extensive tables by Mr. A. Felton, each containing different kinds; another by Isaac B. Baxter, among which were fine asparagus. Mushrooms were presented by P. Gallagher; a brace of *Cucumbers*, by A. Cate gardener to Mrs. Camac, and fine asparagus from the President.

Premiums were awarded as follows: By the committee on plants and flowers—for the best ten *Pelargonium*, in pots, to Wm. Hall, gardener to C. Cope; for the 2d best ditto, to Patrick Gallagher, gardener to Miss Gratz; for the 3d ditto, to James Bisset, gardener to James Dundas; for the best twelve ever-blooming *Roses*, to John Sherwood; for the 2d best ditto, to Andrew Dryburgh; for the best six *Hyacinths*, to Henry A. Dreer; for the 2d best ditto, to the same contributor; for the best six *Pansies*, to Samuel Maupay; for the 2d best ditto, to P. Gallagher; for the best six *Polyanthus*, to James Bisset; for the best hothouse plants, to Arch'd Henderson, gardener to Thos. W. Smith; for the best greenhouse plants, to the same; for the 2d best ditto, to Wm. Hall; for the best and most interesting collection of plants, in pots, to A. Henderson; for the 2d best ditto, to Andrew Dryburgh; for the 3d best, to B. Gulliss, gardener to Jacob Snider, Jr.; for the best display of indigenous plants, to A. Henderson; for the best bouquet, to William Hall; for the 2d best, to A. Henderson; for the best basket of *Flowers*, to Wm. Hall; for the 2d best basket, to A. Henderson. A special premium, of three dollars, for some fine seedling *Cinerarias*, to Wm. Hall. The committee mention with pleasure, seventy-two varieties of the *Camellia*, exhibited by Peter Mackenzie: five of them were never exhibited in the society before, viz. C. Lowii, *Alexina*, *Nobilissima nova*, *Guthriana* and *Sulcata*; besides many tables of plants in fine flower.

The committee on fruits report, that the only articles requiring their attention are a dish of the *Perceval Strawberries*, and three bunches of *Grapes*, *Black Prince* and *Muscad blanc* half, which appear to be in fine eating order; to the former we award a premium of one dollar, and to the latter two dollars; exhibited by James Bisset, gardener to James Dundas.

Dr. Brinckle reported, that he had received, on the 1st inst. from A. J. Downing, a package of scions of the genuine *Peach Plum*, the *Columbia Plum*, the *Autumn Gage*, *Ladies Sweetening Apple*, and the *Townsend*, a native fall apple, said to be very fine; such as he did not require he handed to the appropriate committee for distribution in Mr. Downing's name. Ordered that the thanks of the society be presented to the donor.

The corresponding secretary reported letters from the following honorary and corresponding members recently elected, which were read, presenting their thanks for their election, viz: Dr. Alfred S. Munson, president of New-Haven county horticultural society; George Gabriel, secretary of same; and Dr. Virgil M. Dow, of New-Haven: also a communication accompanying grafts of some of their new *Pears*, natives of New-Haven, from Dr. V. A. Dow, in behalf of Ex-Gov. Edwards, Dr. Munson, and Geo. Gabriel and himself, fully describing the varieties. On motion, ordered that the thanks of the society be tendered, for such a valuable acquisition. The scions had been distributed by the committee for distribution of seeds, etc.

Robert Buist presented to the society his treatise on the cultivation of vegetables. Ordered that the thanks of the society be presented for the gift.

The stated meeting for May was held on the evening of the 15th, in the grand saloon of the Philadelphia Museum. The President in the chair.

The exhibition on the occasion was very fine; and the saloon thronged with the beauty and elite of the city. The collection of plants displayed choice specimens in greater variety than usual. Mr. Dundas' gardener exhibited a table of rare and interesting specimens, among which were a number of *Epiphytes*, *Oncidium papilio*—the butterfly plant, etc.; and another of select *Pelargonium*. The President's gardener presented handsome hot and greenhouse plants—*Achimenes longiflora*, *A. grandiflora* in full flower, grown suspended as air plants; a fine specimen of *Oncidium flexuosum*, and seedling *Cinerarias*, *Pelargonium* and bouquets. B. Gulliss, gardener to Jacob Snider, Jr., presented a superb collection, and a table of *Pelargonium*. John Sherwood, the choicest varieties of *Roses*. Archibald Henderson, a table of cut flowers of indigenous plants, and a basket of natives—very attractive. The *Tulips* from Gen. Patterson's garden, and from Jonathan Bass' Buxton, were remarkably fine.

Of Fruit, there were presented a dish of apples, the Northern Spy from Messrs. Ellwanger & Barry's nursery, Rochester, New-York, of unsurpassed beauty—a dish of lemons, another of strawberries, from Mr. Dundas' greenhouse.

Of Vegetables, there were excellent specimens. Thomas Hancock, of Burlington, N. J., exhibited splendid *Victoria Rhubarb*. James McKee, gardener to Chas. Chauncey, Burlington, presented very fine cauliflowers, new potatoes of large size, and cucumbers. John Riley, gardener at Insane Asylum, numerous heads of cauliflowers. John Sherwood, Sea Kale, Antony Felton, and Isaac B. Baxter, extensive collections.

The Committee on Fruit, report: That their attention has been called to a dish of very fine Apples, of the variety of Northern Spy, of great beauty, and in the highest state of preservation; these were received per hands of our Secretary, Thos. P. James, from the nursery of Ellwanger & Barry, Mount Hope, Rochester, N. Y., for which we recommend a special premium of two dollars.

Also, a dish of very fine Lemons and Strawberries from the greenhouse of James Dundas.

The Committee on Vegetables, report: For the best cucumbers, to James McKee, gardener to C. Chauncey. For the best potatoes, to the same; for the second best, to Anthony Felton. For the best rhubarb, 12 stalks, to Thomas Hancock; for the second best, to Anthony Felton. For the best and most interesting display of vegetables, to Anthony Felton; for the second best, to Anthony Felton. Special premiums were awarded: For a fine display of cauliflowers, three dollars, to James McKee; for another fine display, of ditto, of two dollars, to John Riley, gardener to Insane Hospital; and for a fine display of sea kale, two dollars, to John Sherwood.

David Landreth, V. P., editor of Johnson's Gardener's Dictionary, presented to the Society, a copy of that work; when, on motion, ordered, that the thanks of the Society be presented to the donor.

Ordered, That the sum of three hundred dollars be appropriated, for the increase of the Library.

Members elected.—Wm. G. Allen, Samuel T. Altemus, Dr. I. D. White, J. Francis Fisher, and Joseph L. McNeill.

On motion, adjourned. Thos. P. James, Rec. Sec'y.

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